CEE bankwatch network

Fuelling the Fire

European Investment Bank financing for the incineration industry

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Executive summary

Waste remains a growing problem in Europe, with only a few countries managing to stabilise or reduce the amount of municipal waste produced, or to achieve high recycling and composting rates. During the last few decades the EU has adopted a number of policies aimed at reducing waste generation and increasing recycling and composting, including the Waste Framework Directive (the revision of which is currently being finalised) and the Landfill Directive, aimed at reducing the amount of untreated organic waste going to landfill. A hierarchy of preferred waste management options has been developed, which is now widely accepted, and stipulates that reduction, re-use then recycling are preferred to energy recovery[1] and then final disposal.

The European Investment Bank (EIB), the EU's house bank, is mandated to promote EU policy with its project investments and invested over EUR 1.5 billion in 33 waste management projects between 2000 and 2006, the majority of which were in the EU. The EIB's financing is essentially public money - although much of it is borrowed on the financial markets it is guaranteed by EU governments and low-interest EIB loans represent a political seal of approval, serving to encourage other investors to get involved.

According to EU waste policy, the EIB should support efforts to reduce, recycle and compost waste. However, this analysis shows that instead, in the 2000-2006 period, the majority of the EIB's waste investments - 68 per cent - supported incineration, a waste management method fraught with environmental and economic deficiencies.

If the EIB is to truly support the implementation of EU policy, this bias towards incineration investments must be halted. The EIB needs to seize the opportunity of the Waste Framework Directive revision to review and publish its waste lending policy, and to ensure that it promotes waste reduction and recycling in concrete financial terms rather than continuing to lend financial support to incineration.

[1] *Energy recovery is often used as another name for incineration, however this is controversial as many argue that incineration's primary purpose is the disposal of waste, not energy generation. Energy recovery also includes less controversial technologies such as anaerobic digestion of organic waste.*

Overview of waste in Europe

Waste production and treatment in Europe

The growth of municipal waste is an increasing and widely recognised problem in Europe. In 1995 the average European generated 460kg of municipal waste annually, rising to 520 kg in 2004.[2] There are considerable differences between the EU-15 'old' Member States and the EU-12 New Member States, with EU-15 citizens on average generating 570kg of waste in 2004 and EU-12 citizens generating 335kg each.[3] Some of the wealthiest countries such as Denmark and Luxembourg are responsible for the highest levels of waste production, but perhaps less expectedly Ireland and Cyprus produced the most waste per inhabitant in 2004, with 739kg and 745kg respectively.[4]

Only a few countries have made significant progress with stabilising or reducing the amount of waste generated. Those showing a decrease or stabilisation of municipal waste generation per citizen over the last ten years are Germany, Bulgaria, Czech Republic Lithuania, Hungary, Poland, Slovenia and Slovakia,[5] and it is not clear how much of the effect was due to different economic patterns and how much due to underdeveloped waste collection and recording systems.[6] The 5th Environmental Action Plan set out a target for municipal waste reduction to 300kg per capita by 2000, which was not reached, and the target has not been repeated.[7] The need to reduce waste remains as high as ever, however.

In 2004, 47 percent of EU municipal waste was landfilled, 36 percent was recycled and 17 percent was incinerated.[8] There are significant differences among the treatment methods used in different countries, with most of the New Member States and some EU-15 countries such as Greece, the UK, Spain, Italy, Portugal, Ireland and Finland relying heavily on landfilling, and Denmark relying heavily on incineration, and to a lesser extent Sweden, Luxembourg, the Netherlands, France and Belgium.[9] There is a lack of clear data about recycling rates, but Eurostat data indicates a 2006 recycling rate of over 60 per cent in Austria, Germany, the Netherlands and Belgium.[10]

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2 *European Environment Agency briefing: Better management of municipal waste will reduce greenhouse gas emissions, EEA Briefing 01 2008, 31 January 2008, p.1 http://reports.eea.europa.eu/briefing_2008_1/en*

3 *European Environment Agency briefing: Better management of municipal waste will reduce greenhouse gas emissions, EEA Briefing 01 2008, 31 January 2008, p.1 http://reports.eea.europa.eu/briefing_2008_1/en*

4 *Eurostat: Muncipal Waste generated, 2004 data, http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/H/H1/H12&language=en&product=Yearlies_new_environment_energy&root=Yearlies_new_environment_energy&scrollto=0*

5 *Eurostat: Muncipal Waste generated, http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/H/H1/H12&language=en&product=Yearlies_new_environment_energy&root=Yearlies_new_environment_energy&scrollto=0*

6 *European Environment Agency: The European Environment - State and Outlook 2005, Copenhagen, 2005.*

7 *European Environment Agency: Municipal waste generation (CSI 016) - Assessment published January 2008, http://themes.eea.europa.eu/IMS/ISpecs/ISpecification20041007131809/IAssessment1183020255530/view_content*

8 *European Environment Agency briefing: Better management of municipal waste will reduce greenhouse gas emissions, EEA Briefing 01 2008, 31 January 2008, p.1-2 http://reports.eea.europa.eu/briefing_2008_1/en*

9 *European Environment Agency: The road from landfilling to recycling: common destination, different routes, Brochure No. 3/2007, 22 October 2007, http://reports.eea.europa.eu/brochure_2007_4/en*

10 *Eurostat: Muncipal Waste generated minus Municipal Waste Landfilled and Muncipal Waste Incinerated, http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/H/H1/H12&language=en&product=Yearlies_new_environment_energy&root=Yearlies_new_environment_energy&scrollto=0*

EU policy on waste

The basis for EU waste policy is the Waste Framework Directive (WFD) (75/442/EEC, consolidated with amendments in Directive 2006/12/EC), which is currently being revised. It originally laid out a three-tier hierarchy of waste management options:

- Prevention
- Recovery (including re-use or material or energy recovery)
- Final disposal[11]

It is hoped that the new version of the Waste Framework Directive will bring together clarifications of this hierarchy contained within other Directives and policies. These have clarified that material recovery is preferable to energy recovery,[12] and a clearer five-tier hierarchy has become generally accepted as prioritising the most environmentally acceptable means of waste management:

- Prevention
- Re-use
- Recycling/ composting
- Energy recovery
- Disposal

Source: http://www.leics.gov.uk/wastehierarchy02.gif

In addition to environmental benefits, the European Commission has also given preference to prevention, recycling and composting in terms of their economic effect and job provision. Its Communication on Cohesion Policy in Support of Growth and Jobs: Community Strategic Guidelines, 2007-2013 stated that: "*In order to maximise economic benefits and minimise costs, priority should be given to tackling environmental pollution at its sources. In the waste management sector, this implies focusing on waste prevention, recycling and biodegradation of waste which are cost-effective and help to create jobs.*"[13]

However, as we shall see, the EIB's investments do not reflect the preferences laid out in the waste hierarchy.

One of the main drivers for incineration in the last few years has been the EU Landfill Directive (1999/31/EC), which sets targets to decrease the amount of untreated organic waste being landfilled. This has had a partly beneficial effect in encouraging countries like the UK to finally take the waste problem seriously and try to increase recycling and composting rates. However it has also been used by incineration advocates to promote new incinerators. Yet while incineration is one of the possible treatments for organic waste, it is neither the most energy efficient nor the cheapest given that the waste could be composted or anaerobically digested (food and garden waste) or recycled (paper).

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[11] *Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0012:EN:NOT*

[12] *Commission of the European Communities: Communication from the Commission on the Review of the Community Strategy for Waste Management, 30.07.1996, http://aei.pitt.edu/4116/01/000125_1.pdf*

[13] *Council Decision of 6 October 2006 on Community strategic guidelines on cohesion (2006/702/EC), OJ L 291, 21.10.2006*

What's wrong with incineration?

Incinerators are vigourously rejected by local communities in many countries, and forbidden or restricted by law in the Philippines, parts of Argentina and the US, among others,[14] due to their pollution and economic impacts and their inhibiting effect on the development of sustainable waste prevention and waste treatment practices. While assurances from the incinerator industry that newer facilities are safe, and attempts to re-brand incinerators as 'waste-to-energy' plants have failed to convince many communities[15], it has proved easier to persuade local authorities that incinerators are the one-stop answer to their waste problems, and in recent years there has been a spate of attempts to construct new incinerators in Europe.

Wasting resources and energy

Incineration is often portrayed by its proponents as a form of recycling due to most modern facilities being used to generate energy from waste. However, this is a very inefficient method of utilising the energy embodied in waste products, as the products represent not only the calories which can be burnt, but also the energy needed to make more of the same material from raw materials.

For example, it has been estimated that incinerators are able to utilise only 28 percent of the energy saved by recycling and that from the energy point of view recycling is four times better than incineration.[16] This is backed up by a report from the Sound Resource Management Group Inc. which found that "on average, recycling saves three to five times as much energy as is produced by incinerating municipal solid waste", with up to six times as much energy saved by recycling textiles compared with incinerating them.[17]

A material-specific survey carried out of existing life cycle analyses comparing the environmental impacts of recycling with incineration and in some cases landfill found that for paper and cardboard "a 50% overall energy saving was implied when recycling paper and cardboard instead of incinerating it".[18] For plastic, the average reduction of total life cycle energy consumption was 25-50 percent for recycling compared to incineration.[19] The energy savings from recycling do vary by location and the technologies used, but the overall results for the materials studied are very clear.

Exacerbating climate change

Incineration contributes to climate change in two main ways: first, through the combustion process itself, and second, through the need, described above, to use energy to extract and process replacements for those materials which are burnt, for example the production of new plastic from oil.

Proponents of incineration often try to claim that it is a 'green' source of energy as it is a substitute for the use of fossil fuels for energy production. However, it should be noted that the plastic fraction of waste is in fact made of fossil fuels, and is therefore not replacing them at all. From a solely climate change point of view it would even be better to landfill plastic than to incinerate it in order to contain the carbon rather than emitting

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14 *Neil Tangri, "Incineration, a dying technology", 14.07.2003, Global Anti-Incinerator Alliance (GAIA), http://www.no-burn.org/resources/library/wiadt.pdf, p.92*

15 *All across Europe there are active campaigns against new and operating incinerators - a Google search for 'incinerator campaign' shows a selection of those in English speaking countries.*

16 *Denison, R.A: Environmental life-cycle comparisons of recycling, landfilling and incineration: A review of recent studies, Ann. Rev Energy Environment 21: 191-237, 1996*

17 *Sound Resource Management Group Inc: Recycling Versus Incineration. Canada, Pollution Probe Ontario, 1992*

18 *Dr Henrik Wenzel et al, Technical University of Denmark: Environmental Benefits Of Recycling: An international review of life cycle comparisons for key materials in the UK recycling sector, 2006, p.35*

19 *Dr Henrik Wenzel et al, Technical University of Denmark: Environmental Benefits Of Recycling: An international review of life cycle comparisons for key materials in the UK recycling sector, 2006, p.65*

it as CO_2[20]; however this is not recommendable for resource and energy reasons. Incinerators also require fossil fuels to be used in order to start and maintain the combustion process.

A comparison by Eunomia Research and Consulting of direct fossil fuel derived greenhouse gas emissions found that for incinerators which produce only electricity (the most common type in the UK, for example), incineration results in 33 percent higher non-biogenic greenhouse emissions per kWh than gas power stations, though lower emissions than coal.[21] For incinerators generating both heat and power, direct non-biogenic greenhouse gas emissions are a little lower per kWh than gas-fired combined heat and power plants - 16 percent according to Eunomia - as long as good use is made of the heat generated.[22] However, these figures do not take account of the indirect energy usage required to replace the materials which are burnt.

Adding indirect energy usage for extracting and processing raw materials to replace the ones burnt, as explained in the section above, cancels out any advantage of burning waste in combined heat and power plants. The overview of lifecycle assessments mentioned above also examined the greenhouse gas emissions of recycling compared to incineration and found for example that for paper: "the point mentioned under resource consumption is exactly the same for global warming, as the main contributor to global warming is CO_2 from the energy system."[23]

In other words, a 50 percent reduction in energy use means a 50 percent reduction in greenhouse gas emissions when recycling paper compared to incinerating it, because twice as much energy is needed to produce new pulp than is gained by recovering energy from the paper waste through incineration.

Inhibiting sustainable solutions

Incinerators may inhibit the development of more sustainable waste solutions in two main ways.

First, since they are expensive investments, they may simply crowd out investments into prevention, re-use and recycling. Once an investment has been made into an incinerator, it may be hard for a local authority to find the money or the will to develop other waste management methods.

Second, incinerators constantly require feeding with a steady amount of waste, and councils are often contractually obliged to supply this. The incentive to reduce, re-use and recycle is therefore removed. This is particularly a problem if recycling is not already well developed before the incinerator is built, as in the cases of Nottingham and the County of Hampshire in the UK, which are locked into long-term contracts for incinerators and whose recycling rates are well behind those of other areas of the country as most of their municipal waste is feeding their incinerators.[24]

Recycling can only increase alongside incineration if the total amount of waste increases - the exact opposite of EU policy goals - or if the incinerator is small compared to the overall amount of waste. While it may be argued that this is a matter of good planning, it is remarkably difficult to predict the quantity of waste that will be available for the next thirty years, as new policy measures, together with the rising prices of raw materials, may have a significant effect on waste generation and treatment.

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[20] *US environmental protection agency: "Greenhouse gas emissions from management of selected materials in municipal solid waste", US EPA, 1998*

[21] *Dr Dominic Hogg: A Changing Climate for Energy from Waste? Final Report for Friends of the Earth, Eunomia Research and Consulting, 03.05.2006, p.11*

[22] *Dr Dominic Hogg: A Changing Climate for Energy from Waste? Final Report for Friends of the Earth, Eunomia Research and Consulting, 03.05.2006, p.11*

[23] *Dr Henrik Wenzel et al, Technical University of Denmark: Environmental Benefits Of Recycling: An international review of life cycle comparisons for key materials in the UK recycling sector, 2006, p.42*

[24] *Friends of the Earth England Wales and Northern Ireland briefing: Up in Smoke - why Friends of the Earth opposes incineration, September 2007*

Pollution and health issues

Miodrag Dakic Center for Environment

The most hotly debated aspect of incineration is the resulting pollution and concern about its health effects. Given the wide array of substances found within municipal waste, and the impossibility of controlling what is fed into incinerators, it is no surprise that the exhaust gases, ash and filter residues contain a range of harmful chemicals. Older incinerators with little or no pollution control equipment are widely accepted to have emitted relatively high levels of pollutants such as heavy metals and dust particles, and up to 1995 incineration was by far the largest source of dioxins and furans globally.[25]

Several studies have found evidence of increased rates of health problems near incinerators, for example Elliott et al's study of cancer incidences near 72 UK incinerators, which found a statistically significant decline in risk with distance from incinerators for all cancers combined and for stomach, colorectal, liver and lung cancer, and a 37 percent excess of liver cancer within one kilometre of an incinerator.[26] Cordier et al. found in a 10-year study of communities living near incinerators in South East France that "some subgroups of major anomalies, specifically facial clefts and renal dysplasia, were more frequent in the exposed communities. Among exposed communities, a dose-response trend of risk with increasing exposure was observed for obstructive uropathies."[27]

None of the studies claims to have found a definitive link between municipal waste incineration and health problems, and more work on the topic is clearly needed. However, research remains hampered by the fact that most incinerators are sited in areas with other industrial facilities and in working class areas which already suffer from higher incidences of health problems due to lifestyle issues, and it is therefore difficult to pinpoint precise causes and effects. This is not only a question of scientific methodology but raises the issue of environmental justice. Incinerators are rarely tolerated in affluent areas but as a general rule are sited in areas which are already polluted or whose inhabitants are not perceived as having enough influence to be able to stop the incinerator's construction.

One of the main contentious issues is the degree to which newer incinerators result in less pollution than older facilities. Legislation on pollution limits in the EU has resulted in a general reduction in air pollution from incinerators, however several outstanding concerns remain.

Nano particles are fast becoming a serious concern in the matter of incineration technologies. There are few methods and technologies capable of monitoring particles this small in the new incinerators. Existing research indicates that nanoparticles pose greater risks of toxicity than larger particles such as dioxins. Because of their size, nanoparticles are more readily taken up by the human body than larger sized particles and are able to cross

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[25] *UNEP: Dioxin and furan inventories. National and Regional Emissions of PCDD/PCDF, UNEP, Geneva 1999, p.4. Unfortunately no more recent global assessment is available.*

[26] *Elliott, R, Shaddick, G., Kleinschmidt, I., Jolley, D., Walls, R, Beresford, J. & Grundy, C. "Cancer incidence near municipal solid waste incinerators in Great Britain". British Journal of Cancer, 73, 702-710, 1996*

[27] *S Cordier, C Chevrier, E Robert-Gnansia, C Lorente, P Brula, M Hours "Risk of congenital anomalies in the vicinity of municipal solid waste incinerators", Occupational and Environmental Medicine 2004;61:8-15*

biological membranes and access cells, tissues and organs that larger sized particles normally cannot. The smaller a particle, the greater its surface area to volume ratio, and the more likely to be toxic[28].

They can gain access to the blood stream following inhalation or ingestion, and possibly via skin absorption[29]. Once in the blood stream, they can be transported around the body and are taken up by organs and tissues, including the brain, heart, liver, kidneys, spleen, bone marrow and nervous system[30].

The most harmful pollutants, dioxins and furans, only have to be measured once every six months and the company is often notified beforehand. UK research found that continuous monitoring of dioxins detected up to eight times more than manual sampling.[31]

In spite of the opportunities for incinerator operators to optimise conditions when emission measuring is taking place, breaches of air pollution limits still take place relatively regularly. A so called "state of the art" incinerator run by Indaver in Antwerp, Belgium, was closed down in 2002 because it breached its dioxin limits, releasing dioxin at a rate of 130ng TEQ/Nm3 - 1 300 times more than the EU limit value set by Directive 2000/76/EEC (0.1ng/m3).[32]

Incinerators are also at risk of accidents, such as the fire that took four days to bring under control and damaged the Crymlyn Burrows facility in Wales.[33] The fire happened only months after the Environment Agency had served an Enforcement Notice on HLC, the management company, for failing to install pollution monitoring equipment.[34] By 2002, within its first two years of operation, the Baldovie plant in Dundee, Scotland, had also suffered from two fires and breached emission limits several times.[35]

However, even in incinerators which do function more effectively, the problem remains that whatever pollutants are taken out of the exhaust fumes end up in the fly ash and filter residues, which still have to be landfilled, and the more effective the filters, the more toxic the residues. For example, one of the incinerators held up by the industry as a showcase plant is the Spittelau incinerator in Vienna, but the fly ash from this facility is extremely toxic, with an average dioxin concentration of 2160 ng TEQ /kg. The ashes are mixed with cement and disposed of in a landfill, which is highly risky considering that concrete corrodes and landfills usually leak after some years.[36]

The ash problem is one of the least visible problems of incineration, but an important one nevertheless, with around one third of the original weight of the waste being left as bottom ash, fly ash and filter residues, of which the latter two are classified as hazardous waste. The EU Landfill Directive (1999/31/EC) requires a decrease in the amount but also in the toxicity of the waste being landfilled (Preamble, Para. 8). However, incineration decreases the amount of waste but concentrates the toxicity.

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28 Institute of Occupational Medicine for the Health and Safety Executive (2004). Nanoparticles: An occupational hygiene review. Available at http://www.hse.gov.uk

29 Oberdörster G, Oberdörster E and Oberdörster J (2005). "Nanotoxicology: an emerging discipline from studies of ultrafine particles". Environmental Health Perspectives 823-839

30 ibid

31 Environmental Data Service (ENDS): Dioxin emissions higher than expected, ENDS Report 375, April 2006, pp 5-6

32 Greenpeace Asia Pacific: The case against incineration - Ten reasons to say NO to the TEST Incinerator, April 2003

33 Let's recycle: HLC takes stock after fire at Crymlyn Burrows waste facility, 18.08.2003, http://www.letsrecycle.com/do/ecco.py/view_item?listid=37&listcatid=273&listitemid=4515

34 The Environment Agency: Enforcement Notice served in HLC, 20 May 2003 http://www.grc.cf.ac.uk/lrn/news/shownews.php?showcat=&page=1&item=184&month=05&year=2003

35 D. Morrison: Troubled waste plant runs into new crisis, Scotland on Sunday, 03.03.2002 http://scotlandonsunday.scotsman.com/energyutilities/Troubled-waste-plant-runs-into.2306900.jp

36 Greenpeace: Opening Pandora's Box - A catalogue of 50 POPs hotspots worldwide, September 1999, http://archive.greenpeace.org/toxics/reports/hotspots.pdf

High costs

As seen above, incineration may compete with recycling not only for waste, but also for financial resources. It is widely acknowledged to be the most expensive method of waste treatment, which, if it was energy efficient, non-polluting and created employment, would not in itself be a great problem. However the fact that it suffers from so many other weaknesses suggests that money spent on incineration could be better spent on other waste management methods. The long-term contracts that are usually involved in incineration also mean that today's decision-makers are making demands on local budgets for the next 30 years.

What are the alternatives?

For municipal waste, the most effective alternatives to incineration run according to the waste hierarchy described above are:

- Reduction - sorely neglected in many EU countries, this involves looking at the whole lifecycle of a product and ensuring that as much as possible can be re-used and recycled rather than producing single-use products or low quality products which easily break and cannot be mended. Improving product design and the introduction of clean technologies eliminating toxics could result in less and safer waste.
- Re-use - the introduction of economic incentives can ensure the widespread adoption of re-usable goods and packaging such as nappies, bottles and bags. Re-use schemes can also apply to old clothes and furniture.
- Recycling and composting - it is crucial that kerbside recycling schemes are in place in order to make it convenient for people to separate recyclable waste from residual waste at source; however many countries and regions in the EU still lack such schemes. Composting biodegradable waste is particularly important for reducing the quantity of waste for disposal, whether it is done through a separate collection scheme or through home composting. A combination of prevention, recycling and composting can divert the majority of waste (65-85 per cent) from landfill, with the exact percentage depending on the composition of the waste.

Recycling containers on the island of Krk, Croatia

- An alternative to basic composting is anaerobic digestion, in which composting takes place under low-oxygen conditions, producing methane which can then be burned for energy.
- As a last step, Mechanical Biological Treatment (MBT) can be used to extract recyclable and compostable materials from the residual waste that has not been separated. This results in separated recyclable materials, low-quality compost, and stabilised residual waste that can be landfilled. MBT must be a last step only rather than a replacement for source separation, as the separated materials are more contaminated than from a kerbside collection and the compost has more limited uses. The low-quality compost from MBT is still important as it entails the removal of the biodegradable fraction from the waste to be landfilled, thus reduces or eliminates methane emissions. It is important to note that some MBT facilities result in Refuse-Derived Fuel or RDF to be burnt in incinerators or cement kilns, however this results in the problems described above, including burning recyclable materials

such as paper and plastic.

- The stabilised residual waste from MBT will need to be landfilled until more efficient manufacturing processes have eliminated non-recyclable materials from municipal waste. Although generally undesirable, landfills at least have the advantage over incineration that they do not require a constant quantity of waste and therefore do not interfere with efforts to expand waste prevention and recycling.

Possibly the most inspiring development in waste management in recent decades is the growth of the 'Zero Waste' concept, which represents a move by decision-makers to seriously tackle the amount of waste instead of accepting its constant growth. Zero Waste embodies the thorough application of the waste hierarchy and the transformation of production and consumption into a cycle rather than a linear process. Although its realisation is a long way off in most places, Zero Waste gives a clear direction for the development of waste management policy. Interestingly, most of the communities that have adopted a goal of Zero Waste are outside of the EU, including all of New Zealand, California, Buenos Aires in Argentina, Seattle in the US and Toronto in Canada.[37]

[37] *For a list of countries, regions and cities adopting Zero Waste goals, see Zero Waste International Alliance website, at http://zwia.org/zwc.html*

The European Investment Bank waste management portfolio

Introduction

The European Investment Bank (EIB), founded in 1958 under the Treaty of Rome, is the EU's house bank and is intended to be a policy-driven public institution furthering the EU's objectives with its lending. The EIB functions on a not-for-profit basis, and offers low-interest loans and guarantees. It is governed by the EU member states, which contribute funds, guarantee the EIB's borrowing on the financial markets and participate in decision-making in the bank, creating the political ability to encourage commercial lenders to get involved in projects. The EIB's backing for a project can therefore be crucial in deciding whether it goes ahead or not and thus this responsibility should be used to select only the most useful and well planned projects for financing.

Lending for waste management projects makes up a relatively small component of the EIB's lending. Between 2000 and 2006 it financed 33 waste management projects with loans totalling over 1.5 billion[38], whereas its overall loans signed in the period totalled EUR 291.1 billion.[39]

However, in contrast to EU policy, which identifies landfill and incineration as the least favourable waste management methods, there is a massive imbalance in the EIB's waste treatment investments: **out of 33 waste projects approved by the EIB between 2000-2006, 22 include incineration**. Only two projects appear to have involved sorting waste for recycling and one involved composting. One, in Cornwall, England, includes landfill. The EIB is also considering financing for further incineration projects such as the controversial Zagreb incinerator (see case study, below).

The EIB, through its financial support for incineration, is condoning inaction by decision-makers on further developing waste prevention, reuse and recycling policies. **It is therefore crucial that the EIB develops a policy for financing waste prevention and waste management which reflects EU policy and privileges prevention, re-use and recycling instead of incineration.**

EIB policy on waste management

The EIB, according to Article 267c) of the EU Treaty, is supposed to use its financing to support "projects of common interest to several Member States which are of such a size or nature that they cannot be entirely financed by the various means available in the individual Member States."[40] It is therefore not entirely clear why the EIB finances waste projects at all, as none of them qualify as projects of common interest to several Member States.

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38 *The total of the project elements defined by the EIB in response to an information request, and according to which the calculations have been made on the percentage allocated to each type of waste management, was EUR 1.47 billion. However this does not include all elements of all projects and misses out two projects - the 2003 Portugal cement kiln project, which includes the incineration of waste tyres, and the 2002 Mallorca project (see project tables at the end of the report).*

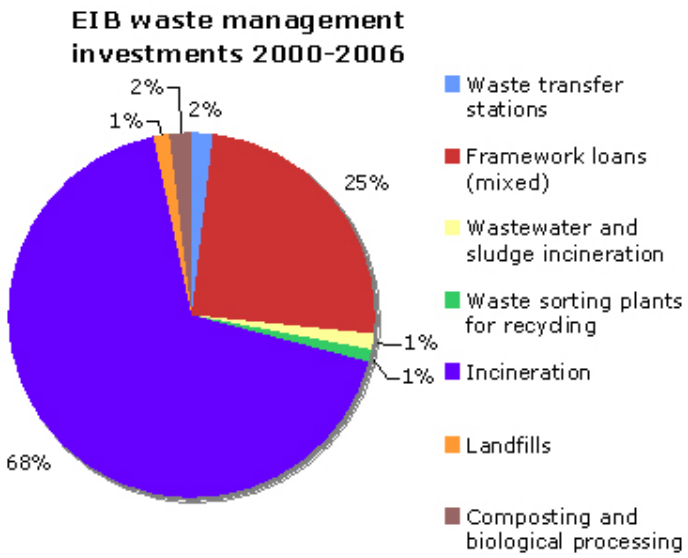
39 *EIB annual reports 2000-2006*

40 *Consolidated version of the Treaty Establishing the European Community, http://europa.eu.int/eur-lex/lex/en/treaties/dat/12002E/htm/C_2002325EN.003301.html, Article 267c)*

However, supposing that a justification can be found for the EIB to finance some waste projects, the EIB should follow EU policy. The EIB does not appear to have its own sectoral policy for waste investments and needs to develop one to ensure that the different strands of EU waste and environmental policy are adequately represented in its investments. Experience of the EIB's investments in the waste management sector so far show that EU waste policy has not been closely adhered to.

The EIB's investments in the waste sector in fact turn the waste hierarchy on its head - it has been financing mostly incineration with energy recovery.

Out of 33 waste management projects financed by the EIB between 2000 and 2006, 22 have included an incinerator.



An information request was submitted to the EIB in order to find out how much financing was given for each kind of waste treatment by the bank between 2000 and 2006. From the answer, laid out in full in Table 2, it is not possible to see exactly which kind of waste treatment was supported by all the loans but it is nevertheless clear **that at least 68 percent of EIB financing went to incineration** - a disproportionate amount for a technology which is supposed to be a 'last resort' in waste management.

Most of the waste management projects generally, and also the incineration projects, have taken place inside of the EU. There is no evidence of the EIB applying double standards in its waste management projects - since its investments in the EU do not adequately promote prevention and recycling it cannot be said that it is applying different or lower standards outside of the EU, as appears to happen in some other sectors such as transport, in which the proportion of investments into the environmentally damaging modes has been higher outside of the EU.[41]

Almost all the waste sector investments were for municipal solid waste. One project, in Cantabria, Spain, in which the EIB lent EUR 36.8 million to Urbaser SA, included a hazardous waste landfill as well as facilities for recycling, composting and incinerating municipal waste. Another project, an incinerator for producing steam for industrial use at the Lenzing company, burns a mixture of substances (mostly liquors and sludge, but also sawdust and some fossil fuels).[42] There do not appear to have been any investments into medical waste treatment facilities.

Apart from the waste sector investments, a EUR 60 million investment in 2003 for Cimpor SA cement company in Portugal also supported the upgrading of three cement plants burning waste tyres, and a EUR 14.4 loan for the St Petersburg wastewater treatment plant also included an incineration component.

41 *CEE Bankwatch Network: "Lost in Transportation - the European Investment Bank's bias towards road and air transport", 2007*

42 *Lenzing website, accessed 24.04.2007, http://www.lenzing.com/energy/en/facts/1209.jsp?menueId=4*

Case Study: planned Zagreb municipal solid waste incinerator, Croatia

Zagreb City Council is planning to build a 385 000 tonnes-per-year waste-to-energy plant, costing at least EUR 170 million, in order to burn municipal waste and sewage sludge. The EBRD was considering financing the project but has stepped back due to concerns about the project development process and public participation, but the EIB still appears to be interested in the project.

Donning skull masks to illustrate the health risks from incineration and the disposal of hazardous ashes, Croatian citizens demonstrate against the proposed Zagreb municipal solid waste incinerator. The EIB are considering financing the project.

Environmental group Green Action and several local residents' groups are campaigning against the incinerator and argue that much more should be done to prevent and recycle waste before investing in expensive and polluting disposal solutions. Without any public consultation, in 2006 the City of Zagreb approved a new waste management programme which allocated EUR 161.4 million for incineration and a pathetic EUR 4.5 m for recycling, with nothing at all allocated for waste prevention measures.

The incinerator would produce around 100 000 tonnes of ash and filter residue per year, much of which would be hazardous, containing dioxins and heavy metals. However, Croatia has no facilities for storing, treating or disposing of hazardous waste, and it is estimated that around half of Croatia's hazardous waste is currently missing, so it is of great concern that more toxic waste could be created with no proper solutions. Officially Zagreb County has agreed to provide a landfill site in return for having its waste incinerated, however none of the districts in the counties are willing to host the landfill.

Incineration would increase air pollution in Zagreb. Previous experiences with Zagreb's disastrous PUTO hazardous waste incinerator, which eventually burned down in 2002, suggests that the Croatian authorities do not have the capacity or will to carry out regular monitoring and punish violations. 250 tonnes of hazardous ashes from PUTO are still sitting at the site, unprotected from the elements, more than five years later.

The first and second Environmental Impact Assessments for the project were rejected but after the EIA review commission was changed and the 2nd EIA was amended, it was approved with no new public consultation. Green Action is taking legal action against the decision.

Green Action is calling for a new city Waste Management Plan to be developed with a maximum level of public participation. Waste prevention measures and door-to-door recycling collections need to be developed and better solutions for residual waste such as Mechanical-Biological Treatment need to be properly examined.

EIB financing for the private sector in waste management

From the 33 projects in the waste management sector, 12 appear to have supported private investors or Public-Private Partnership schemes (EUR 599.3 million in loans) and 19 were for public companies or local authorities (EUR 868.24 million), with one mixed and one unknown. This is a reasonable reflection of the situation in the EU, where public companies still dominate waste collection services (with the exception of some countries like Finland) but many waste treatment services have been outsourced to private companies.[43]

Who benefits?

The number of EIB investments in the waste sector is relatively small compared to, for example, the transport sector, so the problem of excessive benefits to corporations in this sector is less serious. However, where the private sector is involved in waste management service provision, there is a heavy concentration involving rather few companies such as Veolia and Suez, and some companies have benefited from several EIB loans in the waste sector. Suez and its waste subsidiaries SITA and Novergie-Azalys have benefited from three EIB loans for incineration, in Issy-Les-Moulineaux[44] and St-Germain-En-Laye[45], France, and Cornwall in the UK.

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43 *David Hall, "Waste management companies in Europe", Public Services International Research Unit (PSIRU), February 2006.*

44 *Suez Environnement Website: www.suez-environnement.com/var/suezenv/storage/original/application/5910cd22788e91fdf7f31d2341e804f9.pdf*

45 *Novergie-Azalys Website: http://www.novergie-azalys.com*

Case Study: Cornwall County PPP- SITA

The 2006 Cornwall loan is for a Public-Private Partnership in which SITA has won a 30-year waste management contract,[46] which includes the construction of a a highly unpopular incineration plant. The location for the plant has not yet been finalised due to fervent local opposition and therefore no environmental impact assessment has so far been carried out. Yet the EIB, which claims to follow EU environmental legislation, including requiring a full environmental impact assessment, signed a loan for EUR 120.2 million in October 2006, of which EUR 81.72 million is to be allocated for construction of the incinerator.[47]

It is questionable whether SITA's record in delivering waste management services in the UK warrants Cornwall County Council trusting it with its waste for the next 30 years. In 2001 the company's contract was cancelled in Brighton after it increased workloads to absurd levels to decrease costs and suspended workers who did not manage to complete their rounds. The workers responded by going on strike and occupying the depot, and SITA ended up having to pay GBP 3 million to be released from the contract since it could not deliver the services.[48]

The company has also been fined for several environmental offences during the last few years and has had two of its incinerators temporarily closed as a result of technical problems and Enforcement Actions from the Environment Agency.[49] In 2002 a fatal incident at a SITA facility resulted in a GBP 80 000 fine for the company for failure to implement adequate health and safety measures, plus GBP 20 505.41 costs.[50]

Ultimately it is the choice of Cornwall County Council and local people whether SITA is the best choice for the County's waste management, but it is another question whether the company should benefit from a public loan that represents a seal of approval for SITA and the Cornwall waste contract. SITA/Suez and Veolia (formerly Vivendi) are by far the largest waste management companies in Europe. In 2006 Suez had a net income of EUR 3.6 billion,[51] and Suez Environnement, of which SITA forms a part, had a net income of EUR 562 million.[52] It is therefore far from clear why, if the company needed a loan, it had to come in the form of a low-interest public loan and could not come from commercial sources.

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46 *EIB Press Release, 16.10.2006: http://www.eib.org/projects/press/2006/2006-105-ppp-cornwall.htm*

47 *EIB Press Release, 16.10.2006: http://www.eib.org/projects/press/2006/2006-105-ppp-cornwall.htm*

48 *Steve Davies: Sita in Brighton: humiliation by the sea, PSIRU, August 2001*

49 *Letsrecycle.com: Agency promises consultation before SITA can re-open tyre plant, 29.01.2001, http://www.letsrecycle.com/do/ecco.py/view_item?listid=37&listcatid=306&listitemid=2304, BBC website: Firm fined over landfill smell, 19.03.2004, http://news.bbc.co.uk/2/hi/uk_news/england/leicestershire/3551451.stm, SITA UK: Environmental and social responsibility report 2004, p.17, 'This is Hampshire' website: Firm fined GBP10k as smell gets up residents' noses, 05.05.2005, http://archive.thisishampshire.net/2005/5/5/6788.html, SITA UK: Environmental and social responsibility report 2006, p.20; letsrecycle.com news: Boiler damage sees Kirklees incinerator out of action, 22.09.2006, www.letsrecycle.com/do/ecco.py/view_item?listid=37&listcatid=233&listitemid=7994*

50 *Health and Safety Executive website, case No. 2014466, heard on 13.12.04, http://www.hse.gov.uk/prosecutions/case/case_details.asp?SF=CN&SV=2014466*

51 *Suez website: http://www.suez.com/en/finance/key-figures/2006/revenues/revenues/*

52 *Suez Environnement website: http://www.suez-environnement.com/en/suez-environnement/who-we-are/key-figures/2006-key-figures-for-suez-environment/2006-key-figures-for-suez-environment/*

Conclusions and recommendations

The problem of waste is continuously growing in Europe, and as a result the EU has adopted several Directives, strategies and policies aimed at reducing the amount of waste produced, increasing recycling and composting, and minimising the amount of untreated organic waste going to landfill. It is generally agreed that waste reduction, recycling and composting are superior to incineration and landfill, both environmentally and economically.

Between 2000 and 2006 the EIB financed 33 waste management projects, of which 22 included incineration. By amount of money invested this makes up 68 percent of the EIB's waste investments. Only two projects appear to have involved sorting waste for recycling and one involved composting. This indicates a disbalance between the EIB's investments and the policy goals of the EU, which privilege waste reduction, recycling and composting over incineration and landfill. It should be noted that only one EIB-supported project involved landfill.

The EIB should not just finance any project which is legal but must ensure that only the most progressive and environmentally and economically useful projects win its backing. In order to ensure that its investments promote EU waste policy, we recommend the following:

- The EIB needs to examine whether it should finance waste projects at all, given its mandate in Article 267c) of the EU Treaty.
- If there is indeed found to be a basis for EIB financing of waste projects, the EIB needs to introduce a sectoral operational policy for the waste sector, laying out how it intends to ensure that waste prevention, re-use and recycling will be privileged over incineration and landfill in its project selection process.
- The EIB must not support incineration, and landfills should receive support only in exceptional cases where action is needed to bring landfills up to EU standards.
- The EIB should, if it continues to invest in waste projects, prioritise waste prevention, recycling and composting projects.
- As per Article 267c) of the EU Treaty, the EIB should only finance projects where other means of financing, for example commercial loans, are not available. The EIB should therefore not privilege large waste management companies with low-interest public loans as commercial loans should be available for such companies.
- In all projects requiring Environmental Impact Assessments, the EIB must not approve loans until the EIA has been subject to public consultations and approved by the relevant authority.
- In all Public-Private Partnership projects, the EIB needs to ensure that an effective public sector comparator calculation has been carried out comparing a potential PPP with traditional public procurement to see which offers greater value for money, and that this is publicly available.

Table 1. EIB waste management investments 2000-2006[53]

Country	Sector	Year	Description	m EUR	Beneficiary	Private/Public
Austria	Waste	2000	Construction of waste incineration plant producing steam for industrial use in Lenzing (Upper Austria)	8	Reststoffverwertung Lenzing Invest GmbH & Co KG	Private
Austria	Waste	2002	Construction and operation of steam-generating waste incineration plant in Zwentendorf (Lower Austria)	30	Abfallverwertung Niederösterreich GmbH	Private
Austria	Waste	2003	Construction and operation of steam-generating waste incineration plant in Zwentendorf (Lower Austria)	25	Abfallverwertung Niederösterreich GmbH	Private
Austria	Waste	2003	Construction of waste incineration plant in Arnoldstein (southern Austria)	40	Kärntner Restmüll-verwertungs GmbH	Private
Cyprus	Mixed	2005	Cofinancing of priority investment in transport and environment fields and small-scale urban infrastructure and rural development schemes	24	Republic of Cyprus	Public
Denmark	Waste	2003	Upgrading and expansion of combined heat and power municipal waste incineration plant in Glostrup, west of Copenhagen	80.8	Vestforbraending I/S	Public
Denmark	Waste	2003	L90 incinerator, Esbjerg, Construction and operation of municipal waste incineration plant in Esbjerg, on west coast of Denmark (Jutland)	42.8	Laverandoe-foreningen af 1990 Amba	Public

[53] *Grey rows indicate projects involving incineration*

Denmark	Waste	2005	Aarhus waste incineration and water - Expansion of an existing municipal waste incineration plant and implementation of a number of water supply and waste-water treatment schemes in the Municipality of Aarhus	37.09	Århus Kommune	Public
France	Waste	2000	Construction of urban waste processing and recycling centre at Halluin, near Lille (Nord-Pas-de-Calais)	68	Communaute Urbaine de Lille	Public
France	Waste	2001	Constructing of urban waste processing and recycling plant near Melun (Ile-de-France)	45	SMITOM	Public
France	Waste	2002	Construction of urban waste processing and recycling centre at Halluin, near Lille (Nord - Pas-de-Calais)	62	Communauté Urbaine de Lille	Public
France	Waste	2005	Construction of waste treatment facilities in Lille	50	Communauté urbaine de Lille	Public
France	Waste	2006	TDU Paris Issy-Les-Moulineaux - Construction and operation of urban waste incineration plant in Issy-les-Moulineaux (Greater Paris area)	140	SYCTOM local waste authority	Private/PPP
Germany	Waste	2000	Construction of household waste incineration plant in Nürnberg	15.3	Thermische Abfallbehandlung Nürnberg GmBH	Private
Germany	Waste	2006	Thermische Abfallbehandlung Suhl	28.7	Zweckverband für Abfallwirtschaft Südwestthüringen (ZAST)	Public
Hungary	Waste	2001	Upgrading of municipal solid waste processing and wastewater treatment infrastructure	43	Republic of Hungary	Public
Hungary	Waste	2002	Rehabilitation and extension of several regional waste management systems and wastewater treatment facilities throughout Hungary	80	Republic of Hungary	Public

Hungary	Mixed	2004	Cofinancing of Structural Funds projects under Community Support Framework for Hungary (2004-2006)	4.45	Republic of Hungary	Public
Ireland	Mixed	2005	Investment in the urban renewal, environmental and tourism infrastructure fields	60	County Councils	Public
Italy	Waste	2006	Hera Ambiente Extension of four municipal solid waste incineration plants and construction of natural gas-fired combined cycle power plant in Emilia-Romagna region (central-north Italy)	144	Gruppo Hera	Mixed
Netherlands	Waste	2002	Expansion of municipal waste incineration plan with provision for heat and power generation in Alkmaar (northern Holland)	80	Huisvuilcentrale Noord-Holland NV	Public
Netherlands	Waste	2004	Construction of two waste incineration lines serving Amsterdam and 24 neighbouring municipalities	70	Gemeente Amsterdam	Public
Portugal	Waste	2002	Lipor II Expansion and upgrading of solid waste collection and processing facilities for Greater Oporto	35	Serviço Inter-municipalizado de Gestão de Resíduos do Grande Porto Lipor	Public
Portugal	Building materials	2003	Modernisation and upgrading of three cement plants in Alhandra (centre), Souselas (centre-north) and Loulé (south)	60	Cimpor SA	Private
Portugal	Waste	2006	Lipor II Expansion and upgrading of solid waste collection and processing facilities for the city of Oporto	18	Serviço Inter-municipalizado de Gestão de Resíduos do Grande Porto Lipor	Public
Romania	Water/ Waste	2000	Upgrading of waste collection, processing and disposal facilities and of electricity supply	8.7	Not known	Not known

			equipment at Port of Constanta			
Russian Federation	Waste/ Water	2005	St Petersburg Vodokanal II - Rehabilitation and modernisation of sewage sludge treatment facilities at northern wastewater treatment plant in St Petersburg	14.4	Vodokanal	Public
Slovakia	Waste	2000	Refurbishment of municipal waste incineration plant in Bratislava	12	Odvoz a Likvidacia Odpadu. a.s.	Private
Spain	Waste	2002	Construction of waste management facilities at various sites on the island of Mallorca	61	Tirme SA	Private
Spain	Waste	2004	Facilities for recycling, composting and incinerating municipal waste, including special-purpose hazardous waste landfill in Cantabria region	36.8	Urbaser SA	Private
Sweden	Waste	2003	Construction of new waste collection and treatment networks in Göteborg	51	Renova AB	Private
Tunisia	Waste	2000	Development of regional systems for solid waste management	25	Republic of Tunisia	Public
United Kingdom	Waste	2006	Cornwall 'integrated waste management system' PPP (inc. incinerator)	120.2	Cornwall county council/SITA	Private/PPP

Table 2. A breakdown provided by the EIB of different types of waste management financed by the bank, 2000-2006.[54]

Country	Name of project	Description	Year	m EUR
Activity: other municipal waste facilities - waste transfer stations				
France	LILLE ENVIRONNEMENT	Construction of waste treatment facilities in Lille	2005	10
United Kingdom	CORNWALL WASTE PPP	Construction of integrated waste management system for treatment and disposal of domestic waste in Cornwall	2006	19.23
		Sum:		29.23
Activity: composting and biological processing				
France	LILLE ENVIRONNEMENT	Construction of waste treatment facilities in Lille	2005	30
		Sum:		30
Activity: landfills				
United Kingdom	CORNWALL WASTE PPP	Construction of integrated waste management system for treatment and disposal of domestic waste in Cornwall	2006	19.23
		Sum:		19.23
Activity: municipal waste framework loans for different kinds of waste collection and treatment				
Tunisia	DECHETS SOLIDES TUNISIE	Development of regional systems for solid waste management	2000	25
Cyprus	COHESION & STRUCTURAL FUNDS FRAMEWORK	Co-financing of priority investment in transport and environment fields and small-scale urban infrastructure and rural development schemes	2005	24
Hungary	ENVIRONMENT SECTOR FRAMEWORK LOAN	Upgrading of municipal solid waste and wastewater treatment infrastructure	2001	15.44
Hungary	ENVIRONMENT SECTOR LOAN II (ISPA)	Rehabilitation and extension of several regional waste management systems and wastewater treatment facilities throughout Hungary	2002	68
Hungary	STRUCTURAL FUNDS CO-FINANCING FACILITY	Co-financing of Structural Funds projects under Community Support Framework for Hungary (2004-2006)	2004	4.45

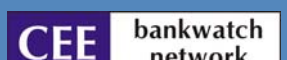
[54] *Unfortunately it does not clarify how much financing went for recycling and waste prevention.*

Country	Name of project	Description	Year	m EUR
Ireland	LOCAL AUTHORITY FRAMEWORK LOAN II	Investment in the urban renewal, environmental and tourism infrastructure fields	2005	60
Portugal	LIPOR II-WASTE TREATMENT&DISPOSAL-AFI	Expansion and upgrading of sold waste collection and processing facilities for the city of Oporto	2002	35
Portugal	LIPOR II-WASTE TREATMENT&DISPOSAL-AFI	Expansion and upgrading of sold waste collection and processing facilities for the city of Oporto	2006	18
Spain	MALLORCA SOLID WASTE MANAGEMENT - AFI	Construction of waste management facilities at various sites on the island of Mallorca	2002	61
Sweden	RENOVA WASTE TREATMENT	Construction of new waste collection and treatment networks in Göteborg	2003	51
		Sum:		361.89
Activity: wastewater and solid waste - including sludge incineration				
Austria	TBA ARNOLDSTEIN	Construction of a waste incineration plant in Arnoldstein (southern Austria)	2003	13
Romania	CONSTANTA PORT ENVIRONMENT AND INFRASTRUCTURE	Upgrading of waste collection, processing and disposal facilities and of electricity supply equipment at Port of Constanta	2000	8.7
		Sum:		21.7
Activity: incineration				
Austria	LENZING RESTMULLKESSEL	Construction of waste incineration plant producing steam for industrial use in Lenzing (Upper Austria)	2000	8
Austria	ENERGIE-VERSORGUNG NIEDEROESTERREICH	Construction and operation of a steam-generating waste incineration plant in Zwentendorf (Lower Austria)	2002	30
Austria	ENERGIE-VERSORGUNG NIEDEROESTERREICH	Construction and operation of a steam-generating waste incineration plant in Zwentendorf (Lower Austria)	2003	25
Austria	TBA ARNOLDSTEIN	Construction of a waste incineration plant in Arnoldstein (southern Austria)	2003	13
Denmark	L90 WASTE INCINERATION PLANT	Construction and operation of a municipal waste incineration plant in Esbjerg, on the west coast of Denmark (Jutland)	2003	42.76
Denmark	VESTFORBRAENDING WASTE INCINERATION II	Upgrading and expansion of a combined heat and power municipal waste incineration plant in Glostrup, west of Copenhagen	2003	80.81

Country	Name of project	Description	Year	m EUR
Denmark	AARHUS WASTE INCINERATION & WATER	Expansion of an existing municipal waste incineration plant and implementation of a number of water supply and waste-water treatment schemes in the Municipality of Aarhus	2005	37.09
France	TDU LILLE	Construction of an urban waste processing and recycling centre at Halluin, near Lille (Nord - Pas-de-Calais)	2000	68
France	TDU LILLE	Construction of an urban waste processing and recycling centre at Halluin, near Lille (Nord - Pas-de-Calais)	2002	62
France	TDU MELUN	Construction of a municipal waste-processing centre near Melun (Ile-de-France region)	2001	45
France	TDU PARIS ISSY-LES-MOULINEAUX	Construction and operation of urban waste incineration plant in Issy-les-Moulineaux (Greater Paris area)	2006	133
Germany	THERMISCHE ABFALLBEHANDLUNG NURNBERG	Construction of household waste incineration plant in Nuremberg (Bavaria)	2000	15.33
Germany	THERMISCHE ABFALLBEHANDLUNG SUHL	Construction of waste incineration plant in Suhl (Thuringia)	2006	28.74
Italy	HERA AMBIENTE	Extension of four municipal solid waste incineration plants and construction of natural gas-fired combined cycle power plant in Emilia-Romagna region (central-north Italy)	2006	144
Netherlands	HUISVUILCENTRALE ALKMAAR - AFI	Extension of a municipal waste incineration plant with provision for heat and power generation in Alkmaar (northern Holland)	2002	80
Netherlands	AMSTERDAM WASTE TREATMENT	Construction of two waste incineration lines serving Amsterdam and 24 neighbouring municipalities	2004	35
Slovakia	BRATISLAVA WASTE INCINERATION	Refurbishment of municipal waste incineration plant in Bratislava	2000	12
Spain	CANTABRIA SOLID WASTE MANAGEMENT	Facilities for recycling, composting and incinerating municipal waste, including special-purpose hazardous waste landfill in Cantabria region	2004	36.8

Country	Name of project	Description	Year	m EUR
United Kingdom	CORNWALL WASTE PPP	Construction of integrated waste management system for treatment and disposal of domestic waste in Cornwall	2006	81.72
Russian Federation	ST PETERSBURG VODOKANAL II	Rehabilitation and modernisation of sewage sludge treatment facilities at northern wastewater treatment plant in St Petersburg	2005	14.4
		Sum:		**992.64**
Activity: waste sorting plants for recycling				
France	TDU PARIS ISSY-LES-MOULINEAUX	Construction and operation of urban waste incineration plant in Issy-les-Moulineaux (Greater Paris area)	2006	7
France	LILLE ENVIRONNEMENT	Construction of waste treatment facilities in Lille	2005	10
		Sum:		**17**
		Sum:		**Sum: 1471.69**[55]

[55] *In the original calculation from the EIB this figure is 1 543.69, however this is more than the sum of the subtotals.*



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