



Policy briefing



**Friends of
the Earth
Europe**

Stopping the Waste:

Maximising resource efficiency and minimising our climate impacts through the review of Europe's main waste law

A chance to:

- **Promote recycling, with EU-wide targets for recycling 50% of municipal and 70% of industrial and construction waste by 2020.**
- **Ensure that Europe really does prevent waste, including setting a target to stabilise waste production at 2008 levels by 2012.**
- **Oppose counter-productive rebranding of incineration. Diversion from landfill can be achieved with more climate-friendly and resource-efficient methods.**

April 2007

1. Introduction

Waste policy is a key part of improving Europe's sustainability, maximising our resource efficiency and minimising our impacts on the climate. More efficient use of resources in Europe will both help protect the environment, and leave more resources available for the rest of the world, particularly poorer countries.

A large part of waste policy in European Union (EU) Member States is defined at European level. One of the key pieces of EU legislation, the Waste Framework Directive, is currently being reviewed and amended.

This briefing outlines why this directive is important, what is happening in the review, what are the key changes that Friends of the Earth Europe and EEB are calling for, and answers some common questions.

1.1 Why is the Waste Directive important?

The Waste Framework Directive (WFD) originates from 1975, though it has been reviewed a number of times since. It provides the umbrella for all EU waste legislation, for example it defines what should be classified as waste (a surprisingly complex issue), and lays out general requirements for permitting of waste installations.

This umbrella nature also means that changes in this directive will have impacts on other

directives, for example those on recycling specific types of products or materials. It also means that this directive is a good place to place new European targets and processes to minimise waste and maximise recycling.

1.2 What is the European Commission proposing?

In December 2005, the Commission proposed revisions to the Waste Framework Directive [1], and produced a Thematic Strategy on Waste Prevention and Recycling [2]. The Commission claimed that these proposals were intended to move Europe towards being a 'recycling society'. However, the revisions focussed on making it easier to define 'end of waste', rebranding certain incinerators as 'recovery' and an obligation on Member States to produce waste prevention plans.

In our view, the Commission's proposed amendments to the WFD are more likely to discourage recycling, and certainly do not address the environmental challenges that face Europe and the world.

1.3 The key issues

In our view, Europe's waste policy should aim at the long term goal of phasing out waste – i.e., ensuring that waste is prevented as far as possible, and then that which remains is reused, recycled or composted. Achieving this target will be challenging, and will require innovation from industry, but the new approaches created will be of global value in a world where resources are increasingly under pressure – and improved industrial efficiency will support the competitiveness of European business.

This is a brief summary of key improvements we think should be made – there is more detail in the next section:

- **The five step waste hierarchy must be binding and directly applicable to all regulatory and strategic policy decisions**, with clear differentiation between prevention, reuse, recycling, energy recovery and landfill. The Commission proposed a three step hierarchy, with re-use, recycling and recovery at the same level.
- **The Commission's proposed process on waste prevention must be strengthened and further developed**, including a clear definition and an initial short-term target for the stabilisation of total waste generation by 2012. It must be supported by a Commission-led process to define indicators, share best practice

and develop further reduction targets for 2020 and policy measures to reach them.

- **There need to be a range of measures to boost recycling**, including:
 - **an EU-wide, "Recycling society" recycling target of 50% of municipal waste and 70% of industrial manufacturing and construction & demolition waste by 2020 (or 5 years later for countries with very low recycling rates).**
 - **A provision to ensure that materials exported from the EU for recycling or reuse can only count towards recycling targets if it can be demonstrated that the reuse or recycling operation took place under conditions that are equivalent to those in the EU.**
 - **a phase-out, by 2020, of the incineration or landfill of any waste that can be reused, recycled or composted**
- **There should be a requirement for incinerators to be as efficient as possible, but not for municipal waste incinerators to be reclassified as recovery.** Any attempt to redefine incineration from 'disposal to 'recovery' (as proposed by the Commission) will drive waste down the hierarchy, reducing efforts to promote recycling, which is known to be the most resource-efficient, job creating and climate friendly approach. This redefinition would also make it easier to transport waste around Europe for incineration, and potentially divert structural funds from investment in recycling infrastructure, which is not acceptable.
- **There should be a continued commitment to further legislative measures on individual product or material streams** (including, in particular, a biowaste composting directive) and continued use of product-based producer responsibility, to oblige manufacturers to make their products reusable, recyclable or more durable. Any EU-wide decisions defining 'end of waste' should be defined through this process, not through the undemocratic comitology process,.

There is more detail on these proposals in the next section; in addition we have set out our views in a briefing in May 2006 [3], amendment recommendations to the parliament in July 2006 [4], and in a talk to a hearing organised by the Socialist Group of the European Parliament [5].

1.4 What is happening now, and how will the final decision be made?

The European Parliament voted to support a number of significant improvements in their first reading plenary vote on 13th February 2007. In particular:

- The parliament supported the full five step waste hierarchy.
- The parliament voted to set a binding waste stabilisation target, that all EU countries should stabilise waste production at 2008 levels by 2012, followed by real prevention targets.
- The parliament voted for a binding minimum recycling rate of 50% Municipal waste and 70% industrial and construction waste for all Member States by 2020, with an extra five years for those countries
- Incineration: The MEPs voted to delete the formula that the European Commission had proposed which would rebrand incineration as 'recovery'.

The next steps are, with predicted timing:

- June 28th 2007: Environment Ministers from EU Member States are expected to reach a political agreement laying out their view on the Parliament's first reading vote.
- Late 2007/start of 2008: The European Parliament will start its second reading, discussing areas of disagreement between parliament and Member States. There will be a vote in the Environment Committee, followed a second reading vote in plenary.
- Member States will discuss the Parliament's second reading, and decide whether they agree

with it. If not, there will need to be a further compromise process (called conciliation) in order to get agreement

- Mid-late 2008: The new Directive will be finalised once the European Parliament and EU Member States agree. It will then be translated into national law in all 27 EU Member States.

Notes on some important words

Waste:

The definition of waste is a complex issue, but it is basically defined in EU law as something that is discarded by its owner.

Recovery vs Disposal:

The argument about recovery vs disposal may seem to be very complex, however the core principle is fairly simple, as it is about signalling the desirability of different waste management approaches. The description of a process as recovery gives a strong positive signal to the market, something that we want to encourage, e.g. materials recovery such as recycling paper. Recovery is something we are trying to promote, disposal is something we are trying to avoid.

Recycling and composting:

It's worth noting that the definition of recycling used by the EU includes composting.

Comitology and codecision:

Two methods of taking EU-level decisions. In comitology the decision is taken by the European Commission at the EU Member States, with little or no involvement of the European Parliament. In codecision the European Parliament is fully involved, so the discussion is more open.

2. Five key issues in more detail

2.1 Key issue 1: The waste hierarchy

The Commission proposes a three step waste hierarchy, placing prevention first, then reuse, recycling and recovery on the same level, with disposal at the bottom.

We consider that waste policy and regulation should be guided by the well established waste hierarchy (reduce > reuse > recycle and compost > energy recovery > disposal). We do accept that, exceptionally, in certain cases where there is overwhelming evidence of environmental benefit, life cycle assessment tools can be used to interpret the hierarchy flexibly, but this should be the exception to the rule.

The five step hierarchy has been shown to be effective by many studies, e.g. that done by ERM for the UK Government [6].

2.2 Key issue 2: Waste prevention

Waste prevention has always been talked about as a high priority in waste policy, including being mentioned in the original 1975 Waste Framework Directive. However, little progress has been made, despite the clear environmental gains that flow from it.

In this revision, the Commission is suggesting a new measure requiring Member States to draw up national programmes and objectives and compile reports on their efforts in Waste Prevention. We consider that these measures need to be backed up by an EU level process to ensure effective use and coordination of national programmes, targets and measures.

Our proposed improvements have three key elements:

- An initial target of stabilisation of total waste by 2012. We believe that this target is both achievable and sensible, with municipal waste levels already stabilising in a number of Member States. We would then suggest that the EU-level process works on identifying further prevention and reduction targets for 2020 and the measures to achieve them.
- An effective EU-level process to set common measurement indicators, share information, best practice and establish what further policy measures (including product eco-design legislation) that assist

the Member States to meet their waste prevention objectives.

- An additional focus on preventing residual waste, which supports our recycling proposals (below). This would add another role to the EU-level process, to identify policy measures that could contribute to the gradual phase out of residual waste (that which cannot be prevented, reused, recycled or composted).

2.3 Key issue 3: Recycling

Recycling and climate change

Recycling not only saves resources such as metals, forests, oil etc – it also reduces global climate emissions, as recycling is generally more energy efficient than manufacturing from virgin materials. This conclusion is confirmed by many studies, including a recent study done for the UK Government by the consultants ERM [6], and a second UK study, carried out for the government-funded Waste and Resources Action Programme (WRAP) [7]. The WRAP study assessed the relative greenhouse gas savings associated with current UK levels of recycling for paper/cardboard, glass, plastics, aluminium and steel, and concluded:

“The UK’s current recycling of those materials saves between 10-15 million tonnes of CO₂ equivalents per year compared to applying the current mix of landfill and incineration with energy recovery to the same materials. This is equivalent to about 10% of the annual CO₂ emissions from the transport sector, and equates to taking 3.5 million cars off UK roads.”

Simplistic claims are often made that burning waste in incinerators will reduce greenhouse gas emissions. In reality, incinerators release fossil fuel derived CO₂ - a waste to electricity incinerator actually releases 33% more fossil-fuel derived CO₂ per unit energy produced than a gas-fired power station [8].

The Commission’s proposal

The Commission’s proposal includes very limited measures on recycling, focussing primarily on a process to define ‘end of waste’ using comitology, in order to develop markets for recycled products. We have two fundamental concerns with this approach:

- We do not consider that recycling will be sufficiently promoted through measures to develop markets. Aluminium cans are worth around £800 per tonne, uncrushed, yet the UK recycles less than 50% of them

[5]. Those countries that have very high levels (>90%) of recycling of aluminium cans achieve it through policy measures such as deposit-return schemes or very effective recycling programmes. This example demonstrates that a market is not, in itself, sufficient for achieving high levels of recycling.

- We do not support the comitology approach to ‘end of waste’, and consider that the EU should instead develop more material- and product-specific recycling directives. The Anglo-Welsh Environment Agency’s experience in developing a compost standard has demonstrated the complexities of ‘end of waste’, and has shown that it is not just a question of the quality of the output, you must also control the quality of inputs (e.g. source separation of waste in this case), and control where the product is used [9].

Our proposals for a recycling society

Given the importance of increasing levels of recycling to improving Europe’s sustainability, Friends of the Earth and EEB are proposing a package of amendments to ensure that this directive really makes a difference. Key elements of these amendments include:

- An EU “Recycling Society” target for recycling 50% of municipal waste and 70% of industrial manufacturing and construction & demolition waste by 2020 (or 5 years later for countries with very low recycling rates).
- A ban on landfill or incineration of reusable, recyclable or compostable materials by 2020, except where landfill or incineration are unequivocally demonstrated to be the best environmental option for the material.
- A requirement to separately collect key recyclable materials. It is only after they are separated from general waste that recyclable materials achieve their value.
- A requirement to pre-treat waste before landfill or incineration to remove recyclables, by 2018.

There are concerns in many Member States that materials that are being exported from the EU for recycling may not be being recycled properly at their destination, or that there may be health and safety issues during their reprocessing in a third country. We are therefore proposing that materials

exported from the EU for recycling or reuse can only count towards the recycling targets above if it can be demonstrated that the reuse or recycling operation took place under conditions that are equivalent to those in the EU.

2.4 Key issue 4: What is waste?

Definitions are extremely important to waste policy, and are one of the most complex areas. We welcome the fact that the Commission has not decided to re-open the issue of definition of waste.

However, we are very concerned at suggestions that would lead to a large number of wastes being exempted as a result of their re-naming as “by-products”. We consider that such amendments would reduce the level of protection of the public and the environment. Any exemptions of process wastes from the definition of waste should be left to detailed jurisprudence on a case by case basis, to ensure a precautionary approach.

2.5 Key issue 5: What is recovery?

The issue of what processes can be defined as recovery (and are therefore encouraged) is a crucial one. If the wrong decisions are made, then the system will encourage inefficient use of waste and resources.

We have two serious concerns with the Commission’s proposals in this area:

- The Commission is proposing a very wide definition of recovery, based on a simplistic single criteria of the replacement (saving) of resources anywhere (and in any way) in the wider economy. This very unselective definition does not consider what is the best environmental option for the waste material, and could allow activities such as filling in holes or those that generate or save small amounts of energy or other resources to be defined as recovery – even if they have a higher overall environmental impact than other recovery options.
- Along the lines of this ‘single criteria approach’ the Commission is proposing to enable the rebranding of household waste incinerators from ‘disposal’ to ‘recovery’, based solely on an energy efficiency threshold. This is in contrast to the current European Court jurisprudence which rules that waste incinerators are disposal, based on the ‘primary purpose’ of the facilities i.e. waste mineralisation, with the recovery of energy being a secondary function/purpose. We do not consider that the Commission’s justifications for this measure make any sense (see

Questions and Answers below for more details), and we consider that issues of incinerator efficiency are best dealt with in the two Directives that already address this issue: the IPPC Directive regulating industrial installations, and the Waste Incineration Directive, regulating incinerators. Both of these directives are to be reviewed in 2007.

Given the vital importance of the criteria that distinguish recovery operations from disposal and thus steer waste material towards the best type of treatment (for all potential types of recovery operations) the EEB and Friends of the Earth are proposing:

- A multi-criteria definition of recovery, based on resource savings, a lower overall environmental impact, and the minimisation of formation and transfer of pollutants. The status of recovery should only be given to the best performing potential recovery operation, assuming best management practices (e.g. separate collection).
- In addition to the general multi-criteria definition, this Directive should provide additional clarity on the status of incinerators. Rather than using the Commission's proposal of a complex energy efficiency formula, it would be simpler and clearer to take up the criteria established in current EU jurisprudence on 'principle purpose/use'. Specifically, in order to be defined as recovery, a facility would have to show that if waste supplies stopped it would substitute the waste with a primary energy source (e.g. coal). As far as we are aware, this jurisprudence is being successfully applied in all Member States and has resulted in no further court cases since the ruling in 2003.

3. Questions & Answers

3.1 Isn't reclassifying some incinerators as recovery needed to ensure diversion of waste from landfill?

In the impact assessment [10], the Commission claim that "*there are concerns that if incineration is defined in the same category as landfilling, some local authorities could be tempted to choose the cheapest option (Landfilling), which will in turn degrade the environment*"

In reality, diverting biodegradable waste from landfill is a legal requirement of the landfill directive. The landfill directive sets legally binding targets on Member States; breach of these targets is likely to result in fines from the European Commission.

The Commission has already fined Member States for breaches of waste law; in 2001 the Commission fined Greece nearly €4.8 million for a landfill that failed to follow EU waste laws [11].

There are many other methods available to divert biodegradable waste from landfill, with the first priority being prevention, then recycling (particularly of the biologically based materials such as paper, cardboard and textiles) and composting or digesting (for food and green waste). Residual waste can then be treated by mechanical-biological methods to (i) remove further recyclables, and (ii) get rid of the biological activity of the waste prior to landfilling.

3.2 Surely the Commission is encouraging incinerators to be more efficient, which is a good thing?

The Commission claims that their equation '*will classify only the most energy efficient incinerators as recovery operations.....a strong incentive for increasing the energy efficiency of future MSWI*' [12].

In fact, the suggested figure does not only classify the 'most energy efficient incinerators' as recovery. The Environment Agency in England & Wales has analysed the formula and concluded [13]:

"The Environment Agency does not support inclusion of the formula to determine an 'R1' recovery classification, as drafted by the Commission

...We feel that any efficiency thresholds set to define recovery activities should be pitched at the highest appropriate level to ensure that the fullest recovery of resources and energy does occur...

... It does not appear likely that a lower efficiency target to be classed as 'recovery' would act to promote better waste incineration technologies, or would facilitate achievement of the landfill diversion targets....

The Waste Incineration Directive requires that heat generated in the incineration plant should be recovered as far as practicable. This is required at existing and new MWIs.... A further incentive by way of an easily achieved 'recovery status' does not appear likely to alter these economic or environmental criteria."

It is worth noting that clarifying the existing 'principle use' approach, as we propose, would lead to the classification of genuine CHP schemes as R1.

We support the aim of getting incinerators to be as efficient as possible, but we do not accept that the recovery definition is the place to do this. Efficiency should be controlled through permitting, for example through IPPC and the Waste Incineration Directive (WID).

3.3 Don't incinerators generate renewable energy, helping in the fight against climate change?

It is often claimed that incinerators produce renewable energy, so they are part of the solution to climate change. This is incorrect - incinerators burn a mixture of fossil-fuel derived materials (e.g. plastics) and biological materials. They then generate energy inefficiently from these materials, due to the fact that they are primarily designed to be a method of reducing the volume of waste, and they have to have a lot of air pollution control equipment.

Research has shown [8] that an electricity-only waste to energy incinerator emits 33% more fossil fuel derived CO₂ than a gas fired power station. If heat from the incinerator is used, then performance is similar to a gas-fired power station – certainly not 'renewable'!

The same research also undertook a more sophisticated comparison of the impact of all CO₂ emissions from incineration when compared with other residual waste treatment methods. This analysis concluded that pre-treatment of residual waste to remove recyclables and degrade biodegradable materials, followed by landfill of the end material, was better for the climate than incineration, with or without recovery of heat. It is therefore clear that incineration is not the best way to divert biodegradable waste from landfill.

The analysis is even more negative if recyclable materials are burnt, as the research shows that

recycling is almost invariably better than incineration from a climate point of view [7].

There are 100% renewable energy from waste technologies. One of the best of these is anaerobic digestion of source-separated food waste. With this technology, food waste from homes and businesses is separately collected and digested, producing a methane-based biogas which can be used for power generation or fuelling vehicles. In addition, a soil conditioner is produced which can be used in agriculture.

3.4 Are they any credible alternatives to the Commission's energy efficiency formula for clarifying the status of incinerators?

Yes. The current European Court of Justice jurisprudence clarifying the interpretation of the 'principle purpose/use' criteria can be taken up directly into the waste framework directive.

This jurisprudence (C-458/00) establishes that, in order for an incinerator to be defined as recovery, the facility has to show that if waste supplies stopped, it would substitute the waste with a primary energy source (e.g. coal). If this is not the case – i.e. if the facility would cease to operate if no longer supplied with waste - then its primary purpose/use is disposal and not recovery.

The jurisprudence has been in place since 2003 and, as far as we are aware, it is applied without problems in all Member States except one or two very special cases in Germany. We suggest that Germany-specific issues should be resolved within Germany, rather than by an EU-wide reclassification.

3.5 Hasn't the European Commission dealt with all the questions about the impacts of incineration re-classification?

The Commission claimed to demonstrate their case for reclassification in their impact assessment, and in their letter to the Environment Committee. Yet these have serious deficiencies, e.g:

- There is no serious analysis of how promotion of incineration will impact on recycling, despite many examples of negative impacts (see 3.6).
- There is no analysis of other options of improving incinerator efficiency - e.g. changes in the Waste Incineration Directive (WID) or IPPC - even though both are being reviewed in 2007.

- There is no analysis of why promoting incineration, with its emissions of fossil-fuel derived CO₂, is the best way to get material out of landfills, rather than fining of MS through the landfill directive, or a promotion of biowaste collection and composting (e.g. a biowaste directive).

A review of the Commission’s impact assessment carried out for the Parliament [14] concluded that the Commission’s impact assessment on this issue – and others - was inadequate:

“the extent of IA’s evaluation of the impacts of these changes is insufficient. The analysis of the change in the definition of ‘recovery’ and when waste ceases to be waste is of particular concern.”

3.6 But don’t the figures show that incinerators don’t have a negative impact on recycling rates?

No, what the figures show is that those Member States who either had little landfill, or who decided to move away from landfill earlier than most, have got higher recycling and incineration rates than those who didn’t.

You don’t achieve high recycling rates through incineration – you have to invest in collection systems, market development and incentive systems such as deposit-refund. In other words, all countries that show high levels of recycling (e.g. Austria, Netherlands, Germany, Denmark) do so because of effective separate collection and recycling targets and policies, not because of their incineration capacity. In fact, Eurostat data shows that Austria achieves one of the highest recycling rates in Europe, 64%, with less than 11% incineration.

It is often claimed that there is no evidence that incineration competes with recycling for waste. In reality, there is of course a link – there is only so much waste available, so the amount processed through all treatment techniques must add up to 100% of the waste. Regional data for household waste from Denmark in 2005 clearly shows that regions with high incineration have lower recycling and *vice versa* [15]:

Region	Recycling	Incineration	Landfill
Hovedstaden	21%	77%	2%
Nordjylland	29%	63%	8%
Sjælland	31%	59%	10%
Midtjylland	40%	53%	7%
Syddanmark	41%	52%	6%

It’s worth noting that Denmark’s recycling rate is well behind levels achieved by Flanders, for example, which recycles 71% of municipal waste.

Incinerators with long contracts actively compete with recycling for materials, and are a barrier to waste prevention. This is a particular issue in those countries, like the UK and many new Member States, where incinerators are operated by private companies with long (25-60 year) contracts which demand fixed tonnages of waste.

A good example of this competition problem is the situation in the Hampshire region of England, where three new incinerators have been built since 2003. The majority of local authorities in Hampshire are now failing to meet their recycling targets, and recycling rates are stagnating across the county [16], with the incinerators now absorbing virtually all residual waste in the region [17]. This is in contrast to other parts of England where recycling rates have been increasing rapidly in recent years. These increases are due to more investment in separate collection, coupled with investment in recycling and composting infrastructure, and the development of stronger markets for recyclable materials [see 18].

3.7 Is recycling or composting really better for the climate than incineration or landfill?

As mentioned above, the UK-government funded agency WRAP studied a large number of life cycle assessments, and concluded that recycling was almost invariably the best option for the climate [7].

It is important to divert biodegradable waste away from landfill, but there are methods of doing this that do not generate the large amounts of fossil-fuel derived CO₂ that incinerators emit. In particular, source separated collection of compostable or digestible wastes, and source-separated collection of recyclables such as paper, cardboard and textiles. Residual waste can then be pre-treated to remove biological activity (and hence production of methane), before being landfilled.

3.8 Is it really possible for every EU state to recycle at least 50% of municipal waste and at least 70% of industrial manufacturing and construction & demolition waste?

According to Eurostat, Belgium and Austria are already recycling more than 50% of their municipal waste, and Germany and the Netherlands are almost at this level. In addition,

the UK government has proposed a 50% target for 2020 in its consultation in 2006 on the England Waste Strategy [19].

As for industrial manufacturing and construction & demolition waste, a number of Member States are already achieving recycling rates in excess of 80% for these waste streams.

3.9 Is there enough demand for the materials from recycling, and are they really being recycled properly?

Across Europe, the recycling industry is creating jobs, both directly in recycling and also in reprocessing and providing materials to manufacturing industry. There is still a huge potential for growth in this reprocessing sector, particularly in areas with strong manufacturing industry.

Some recycling systems are clearly more effective than others – in particular, separate collection produces higher quality materials, allowing high quality recycling in Europe, and providing manufacturers with high quality feedstock.

In some cases, recyclable materials are being sent abroad, in particular to Asia. Although we would generally prefer recyclables to be processed in Europe, the reality is that many of the manufactured goods we use in Europe are made in Asia, and so to ‘close the loop’ on materials we will inevitably have to export recyclable resources to those countries. However, it is important that measures are taken to ensure that such recycling is done to a high standard of environmental and worker protection.

We are therefore proposing that materials sent abroad to be reused or recycled can only count towards the recycling targets above if it can be demonstrated that the reuse or recycling operation took place under conditions that are equivalent to those in the EU.

3.10 How can EU countries stabilise waste growth by 2012 when waste volumes are growing?

Eurostat data show that Belgian municipal waste generation was stable between 1995 and 2004, whilst municipal waste in Germany was generally stable from 1999 to 2004. Other countries, such as the UK, are also noticing that the increase in municipal waste generation is now moving towards zero. In reality, of course, stabilisation is only the first step – we need to move all EU countries towards actually reduction in waste volumes.

4. Conclusions

This waste policy revision provides a real opportunity to create more efficient and sustainable use of resources in Europe. Unfortunately, the Commission’s proposals do not address this challenge, and seem to be more focussed on promoting incineration. In addition, this proposal does not address the real inadequacies in waste management within many EU Member States.

Friends of the Earth Europe and EEB are looking to Members of the European parliament, and European Union governments, to improve this proposal to ensure that it really does set Europe in the right direction, promoting innovation towards a more sustainable future.

5. Contacts and web sites

For further information, see the following web sites, or contact us directly:

<http://www.eeb.org/activities/waste/Index.htm>

http://www.foeeurope.org/activities/waste_management/index.htm

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