COMMUNITY GUIDELINES ON STATE AID FOR ENVIRONMENTAL PROTECTION

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1. **INTRODUCTION**

1.1. **State aid policy and Energy Policy for Europe**

The spring 2007 European Council called on Member States and EU institutions to pursue actions to develop a sustainable integrated European climate and energy policy. The Council stated among other things: "Given that energy production and use are the main sources for greenhouse gas emissions, an integrated approach to climate and energy policy is needed to realise this objective. Integration should be achieved in a mutually supportive way. With this in mind, the Energy Policy for Europe (EPE) will pursue the following three objectives, fully respecting Member States' choice of energy mix and sovereignty over primary energy sources and underpinned by a spirit of solidarity amongst Member States:

- increasing security of supply;
- ensuring the competitiveness of European economies and the availability of affordable energy;
- promoting environmental sustainability and combating climate change."

As a milestone in the creation of this Energy Policy for Europe, the European Council supported a comprehensive Energy Action Plan for the period 2007-2009 and invited in particular the Commission to submit the proposals requested in the Action Plan as speedily as possible. One of these proposals relates to the review of the Community guidelines on State aid for environmental protection.

The European Council made a firm independent commitment for the EU to achieve at least a 20% reduction in greenhouse gas emissions by 2020 compared to 1990. It also stressed the need to increase energy efficiency in the EU so as to achieve the objective of saving 20% of the EU's energy consumption compared to projections for 2020, and endorsed a binding target of a 20% share of renewable energies in overall EU energy consumption by 2020 as well as a 10% binding minimum target to be achieved by all Member States for the share of biofuels in overall EU transport petrol and diesel consumption by 2020.

These new guidelines constitute one instrument to implement the Action Plan and the environmental aspects of the energy- and climate change-related targets decided by the European Council.
1.2. State aid policy and environmental protection

2. In the "State Aid Action Plan – Less and better targeted State aid: A roadmap for State aid reform 2005-2009" \(^1\) (hereafter referred to as the "State Aid Action Plan") the Commission noted that State aid measures can sometimes be effective tools for achieving objectives of common interest. Under some conditions, State aid can correct market failures, thereby improving the functioning of markets and enhancing competitiveness. It can also help to promote sustainable development, irrespective of the correction of market failures \(^2\). The State Aid Action Plan also stressed that environmental protection can provide opportunities for innovation, create new markets and increase competitiveness through resource efficiency and new investment opportunities. Under some conditions, State aid can be conducive to these objectives, thus contributing to the core Lisbon strategy objectives of more sustainable growth and jobs.

3. The primary objective of State aid control in the field of environmental protection is to ensure that State aid measures will result in a higher level of environmental protection than would occur without the aid and to ensure that the positive effects of the aid outweigh its negative effects in terms of distortions of competition, taking account of the polluter pays principle.

4. Economic activities can harm the environment not least through pollution. Without government intervention, undertakings can avoid bearing the full cost of their pollution. So, in economic terms, the market fails, since by not taking into account the external effects of pollution it does not lead to an efficient outcome. Too much pollution is generated by the market and the associated negative externalities must be borne by society as a whole.

5. According to the polluter pays principle (hereafter "PPP") established in Article 174 of the EC Treaty, these negative externalities can be tackled by ensuring that the polluter pays for its pollution, which implies full internalisation of environmental costs by the polluter. This is intended to ensure that prices reflect the true costs of economic activities for society. Full implementation of the PPP would thus lead to correction of the market failure. The PPP can be implemented either by setting mandatory environmental standards or by market-based instruments. Some of the market-based instruments may involve the granting of State aid to all or some of the undertakings which are subject to them.

6. However, there are currently limits to the application of the PPP by Member States. The cost of environmental protection varies between undertakings, while the importance attached to it varies between Member States. Member States that unilaterally impose relatively strict requirements on their undertakings as regards environmental protection may see their undertakings disadvantaged in comparison with those from other Member States with lower national standards. Furthermore, Member States may be concerned that complete and immediate implementation of the PPP would lead to a significant cost increase for polluting undertakings and thus may

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\(^1\) COM(2005) 107

\(^2\) See paragraph 10 of the State Aid Action Plan.
create an external shock for the economy and create other disturbances. For these reasons, the PPP is insufficiently implemented.

7. This regulatory failure should not prevent Member States from imposing requirements for environmental protection that go beyond Community requirements and reducing negative externalities to the greatest possible extent.

8. In order to increase the level of environmental protection, Member States may want to use State aid to create incentives on an individual level to achieve a higher level of environmental protection than required by Community standards or in the absence of Community standards. They may also set national standards or environmental taxation at a higher level than required by Community legislation or in the absence of Community legislation.

9. The Commission considers that it is necessary to revise the State aid rules on environmental protection in order to meet the objectives set out in the State Aid Action Plan, in particular to ensure better targeted aid, more economic reasoning and more effective procedures. Furthermore, the Commission considers it necessary to take into account developments in environmental policy and environmental technologies and to adjust the rules in the light of experience.

10. These guidelines set out the rules the Commission will apply in the assessment of environmental aid, thereby increasing legal certainty and transparency of its decision-making. Aid for environmental protection will primarily be justified on the basis of Article 87(3)(c) of the EC Treaty. These guidelines replace the Community guidelines on State aid for environmental protection3 that came into force in 2001.

11. These guidelines lay down the rules for two types of assessments: a standard assessment for measures under a certain threshold (Chapter 3) and a detailed assessment for aid amounts above that threshold (Chapter 4).

12. These guidelines will be applied to all measures notified to the Commission (either because the measure is not covered by a block exemption regulation (BER), or because a BER imposes an obligation to notify aid individually, or because the Member State concerned decides to notify a measure which could in principle have been exempted under a BER), as well as for the assessment of all non-notified aid.

1.3. The balancing test and its application to aid for environmental protection

1.3.1. The State Aid Action Plan: less and better targeted aid, balancing test for the assessment of aid

13. In the State Aid Action Plan, the Commission announced that "To best contribute to the re-launched Lisbon Strategy for growth and jobs, the Commission will, when relevant, strengthen its economic approach to State aid analysis. The economic approach is meant to ensure a better focus and targeting of State aid measures towards the objectives of the re-launched Lisbon Strategy."

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3 OJ C 37, 3.2.2001, p. 3.
14. In assessing whether an aid measure can be deemed compatible with the common market, the Commission balances the positive impact of the aid measure in reaching an objective of common interest against its potentially negative side effects, such as distortion of trade and competition. The State Aid Action Plan, building on existing practice, has formalised this balancing exercise in what has been termed a "balancing test". It operates in three steps; the first two steps address the positive effects of State aid and the third addresses the negative effects and resulting balancing of the positive and negative effects. The balancing test is structured as follows:

(1) Is the aid measure aimed at a well-defined objective of common interest? (for example, growth, employment, cohesion, environment, energy security). In the context of the present Guidelines, the relevant common interest objective is the protection of the environment.

(2) Is the aid well designed to deliver the objective of common interest that is to say, does the proposed aid address the market failure or other objective?
   (a) Is State aid an appropriate policy instrument?
   (b) Is there an incentive effect, namely does the aid change the behaviour of undertakings?
   (c) Is the aid measure proportional, namely could the same change in behaviour be obtained with less aid?

(3) Are the distortions of competition and effect on trade limited, so that the overall balance is positive?

This balancing test is applicable to the design of State aid rules as well as to the assessment of cases.

1.3.2. The objective of common interest addressed by the guidelines

15. The first indent of Article 2 of the Treaty on European Union stipulates that sustainable development is one of the main objectives in the European Union. This should be based on economic prosperity, social cohesion and a high level of protection of the environment. Promoting environmental protection is thus an important objective of common interest. In addition, Article 6 of the EC Treaty mentions the need to integrate protection of the environment into all Community policies and Article 174(2) of the EC Treaty states that environment policy must rest on the principles of precaution, prevention, rectifying pollution at source and "polluter pays".


5 This can include activities such as the release of chemical pollutants into the environment, physically altering for instance the aquatic environment, and thereby causing disturbances of ecosystems or activities having a negative impact on the quantitative status of for instance water resources.
16. These guidelines lay down the conditions for authorising the granting of State aid to address those market failures which lead to a sub-optimal level of environmental protection.

17. The most common market failure in the field of environmental protection is related to negative externalities. There is no automatic mechanism ensuring that undertakings acting in their own self-interest will take the negative externalities linked with pollution into account when they decide how and how much they will produce. In other words, the costs of production are perceived to be lower from the point of view of the undertaking than from the point of view of society and therefore undertakings tend to produce too much pollution or apply insufficient measures to protect the environment.

18. Governments confronted with this market failure tend to use regulation in order to ensure that the negative externalities linked with pollution are accounted for. Through the introduction of standards, taxation, economic instruments and other regulation, the undertakings producing pollution ("polluters") have to pay for the cost of pollution to society – the PPP. This may, however, lead to substantial additional production costs, negatively affecting their economic activity. Moreover, since the generation of pollution is unevenly spread among industries and undertakings, the costs of any environmentally friendly regulation tend to be differentiated, not only between undertakings, but also between Member States. Member States may furthermore have a different appreciation of the need to introduce high environmental targets.

19. In the absence of Community standards and market-based instruments fully reflecting the PPP level (regulatory failure), Member States may thus decide unilaterally to pursue a higher level of environmental protection. This may in turn create additional costs for their undertakings. For that reason, in addition to regulation, Member States may use State aid as a positive incentive to achieve higher levels of environmental protection. They can do this in two ways:

- **Positive individual incentives to reduce pollution and other negative impacts on the environment:** First, Member States can create positive incentives on an individual level (at the level of the undertaking) to improve on Community standards. In this case, the aid beneficiary reduces pollution because it receives aid to change its behaviour, and not because it has to pay for the costs of this pollution. The objective of State aid here is to address directly the market failure linked with the negative effects of pollution.

- **Positive incentives to introduce national environmental regulation exceeding Community standards:** Second, Member States can impose national regulation going beyond the Community requirements. However, this may lead to additional costs for certain undertakings, and thus affect their competitive conditions. Moreover, such costs may not represent the same burden for all undertakings given their size, market position, technology and other specificities. In this case, State aid may be necessary, to lessen the burden on the most affected undertakings and thereby enable Member States to adopt national environmental regulations that are stricter than Community standards.
1.3.3. **Appropriate instrument**

20. There is a role for government intervention to ensure more adequate environmental protection. Regulation and market-based instrument are the most important tools to achieve environmental objectives. Soft instruments, such as voluntary eco-labels, and the diffusion of environmentally friendly technologies may also play an important role. However, even if finding the optimal mix of policy instruments can be complicated, the presence of market failures or political objectives does not automatically justify the use of State aid.

21. According to the PPP, the polluter should pay all the costs of its pollution, including the indirect costs borne by society (internalisation of external costs). For this purpose, environmental regulation can be a useful instrument to increase the burden on the polluter. Respect for the PPP ensures, in theory, that the market failure linked to negative externalities will be rectified. Consequently, if the PPP were fully implemented, further government intervention would not be necessary to ensure a market-efficient outcome. The PPP remains the main rule and State aid is in fact a second-best option. Using State aid in the context of the PPP would relieve the polluter from the burden of paying the cost of its pollution. Therefore, State aid may not be an appropriate instrument in such cases.

22. However, in particular due to incomplete implementation of the PPP, the existing level of environmental protection is considered to be unsatisfactory for the following reasons:

   (a) First, the exact cost of pollution is not easy to establish. It is technically complicated to calculate the extra costs for society for all types of production, and it may sometimes be inefficient to take account of the fact that different producers have different levels of pollution if the associated administrative costs are very high. Different sensitivities towards changes in consumer prices (price elasticity) also play a role. Furthermore, the valuation of the cost of pollution can differ among individuals and societies, depending on societal choices as regards for instance the effect of current policies on future generations. In addition, some costs are difficult to express without some uncertainty in monetary terms, such as shorter life expectancy or environmental damage. There will therefore always be a degree of uncertainty involved in calculating the costs of pollution.

   (b) Second, raising the price of a series of industrial products too abruptly in order to internalise the cost of pollution may act as an external shock and create disturbances in the economy. Governments may therefore consider it more desirable to progress with moderation towards integrating the full price of pollution into certain production processes.

In the context of an unsatisfactory level of environmental protection, although not resolving all the above-mentioned problems, State aid may provide positive incentives to undertakings (*individual incentives*) to carry out activities or make investments which are not mandatory and would otherwise not be undertaken by profit-seeking companies.
1.3.4. Incentive effect and necessity of aid

23. State aid for environmental protection must result in the recipient of the aid changing its behaviour so that the level of environmental protection will be higher than if the aid had not been granted.

24. The incentive effect is identified through counterfactual analysis, comparing the levels of intended activity with aid and without aid. The objective is to ensure that undertakings would not, without the aid, engage in the same activity because of its intrinsic benefits.

25. Correct identification of the counterfactual scenario is key to determining whether or not State aid has an incentive effect. It is also essential for the calculation of the extra investment or production costs incurred to achieve the higher level of environmental protection.

26. Investments may have to be made to meet mandatory Community standards. Since the company would have to fulfil these obligations in any event, State aid to meet mandatory Community standards cannot be justified.

1.3.5. Proportionality of the aid

27. Aid is considered to be proportional only if the same result could not be reached with less aid. In addition, proportionality is also related to the degree of selectivity of a measure.

28. In particular, the aid amount must be limited to the minimum needed to achieve the environmental protection sought. Therefore, eligible costs for investment aid are based on the notion of the extra (net) cost necessary to meet the environmental objectives. This concept implies that all advantages to the company must in principle be subtracted from the additional investment costs.

29. For some measures, it is not possible to rely on extra costs; this is the case for aid in the form of environmental tax exemptions or reductions and aid in the form of tradable permit schemes. In these cases, proportionality has to be ensured through conditions and criteria which ensure that the beneficiary does not receive excessive advantages, and that the selectivity of the measure is limited to the strict minimum.

30. The cost of achieving environmental protection is often higher for small and medium-sized enterprises (hereafter "SMEs") in relative terms compared to the size of their activity. In addition, the ability of SMEs to bear such costs is often restricted by capital market imperfections. For this reason, and in view of the reduced risk of serious distortions of competition when the beneficiary is an SME, a bonus can be justified for SMEs for some types of aid.

31. In addition, Member States are encouraged to ensure cost-effectiveness in achieving the environmental benefits, for example by choosing measures for which the avoided external costs are significant in relation to the amount of aid. However, since there is no direct link between the avoided external costs and the cost incurred by the undertaking, avoided external costs shall only be used as a basis to determine State aid amounts in exceptional cases. Normally, in order to ensure an adequate incentive for the undertaking to change its behaviour, the aid amount must thus be linked directly to the cost borne by the undertaking.
1.3.6. **Negative effects of environmental aid must be limited so that the overall balance is positive**

32. If environmental State aid measures are well targeted to only counterweigh the true extra costs linked to a higher level of environmental protection, the risk that the aid will unduly distort competition is normally rather limited. Consequently, it is crucial that environmental State aid measures are well targeted. However, in cases where aid is not necessary or is only partly necessary to achieve its intended objective, the aid may harm competition in a number of ways. This may in particular be the case if aid leads to:

(a) maintaining inefficient firms afloat;
(b) distorting dynamic incentives/crowding out;
(c) creating market power or exclusionary practices;
(d) artificially altering trade flows or the location of production.

33. In some cases the purpose of the measure is to shift production away from more polluting products towards more environmentally friendly products where the beneficiary's products substitute for those of its competitors. In such cases the effect on market shares vis-à-vis a situation without aid should not be considered to be harmful, at least as long as the reductions in external costs by far outweigh the reduction in the profits of non-aided firms. The lower the expected environmental effect of the measure in question, the more important the verification of its effect on market shares and profits of competing technologies.

1.4. **Implementing the balancing test: legal presumptions and need for more detailed assessment**

34. Without prejudice to Articles 4 to 7 of Council Regulation (EC) No 659/1999,6 the legal presumptions applied by the Commission differ according to the type of State aid measure notified.

35. In Chapter 3 of these guidelines, the Commission has identified a series of measures in respect of which it considers *a priori* that State aid will address a market failure hampering environmental protection or improve on the level of environmental protection. The Commission also sets out a series of conditions and parameters which are intended to ensure that State aid targeting these measures actually has an incentive effect, is proportionate and has a limited negative impact on competition and trade. Chapter 3 thus contains parameters in respect of the aided activity, aid intensities and conditions attached to compatibility.

36. However, for aid amounts above certain thresholds as well as for certain specific situations, additional scrutiny is necessary, because of higher risks of distortion of competition and trade. The additional scrutiny will generally consist in further and more detailed factual analysis of the measure in accordance with Chapter 4. These

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measures will be declared compatible if the balancing test pursuant to Chapter 4 results in an overall positive evaluation. In the context of this analysis, no compatibility criteria will be presumed to be fulfilled at the outset.

37. As a result of this detailed assessment, the Commission may approve the aid, declare it incompatible with the common market or take a compatibility decision subject to conditions.

1.5. Reasons for specific measures covered by these guidelines

38. The Commission has identified a series of measures for which State aid may, under specific conditions, be compatible with Article 87(3)(c) of the EC Treaty.

1.5.1. Aid for firms improving on Community standards or increasing the level of environmental protection in the absence of Community standards

39. This type of aid provides individual incentives to companies to achieve higher environmental protection. Normally, an undertaking does not have an incentive to go beyond mandatory standards if the cost of doing so exceeds the benefit for the undertaking. In such cases State aid may be granted to give an incentive to undertakings to improve environmental protection. In accordance with the Community objective to support eco-innovation, more favourable treatment can be accepted for eco-innovation projects that address the double market failure linked to the higher risks of innovation, coupled with the environmental aspect of the project. Aid for eco-innovation thus aims to accelerate the market diffusion of eco-innovations.

1.5.2. Aid for early adaptation to future Community standards

40. These guidelines do not authorise aid to assist undertakings to comply with Community standards already in force, because such aid would not lead to a higher level of environmental protection. However, in the case of SMEs, State aid may ensure significantly quicker implementation of newly adopted Community standards and thereby contribute to reducing pollution at a faster pace than would have been the case without the aid. In such situations, State aid may therefore create individual incentives for SMEs to counterbalance the effects of the negative externalities linked to pollution.

1.5.3. Aid for undertakings improving on Community standards or increasing the level of environmental protection in the absence of Community standards in the transport sector

41. Transport is responsible for a large share of overall greenhouse gas emissions (approx. 30%), as well as for local pollution by dust, particulates, NOx and SOx. Hence, it is important to encourage clean modes of transport, both in order to fight global climate change and in order to reduce local pollution, in particular in cities. In this context, it is particularly important to encourage the acquisition of clean transport vehicles (including clean ships).

1.5.4. Aid for energy saving

42. This type of aid addresses the market failure linked to negative externalities by creating individual incentives to attain environmental targets for energy saving and for the reduction of greenhouse gas emissions. According to the Kyoto Protocol the EU is committed to reduce greenhouse gas emissions by 8 per cent below the 1990 level in
the period 2008-2012. At Community level, the aim is to achieve at least a 20% reduction in greenhouse gas emissions by 2020 compared to 1990\(^7\), as endorsed by the European Council of 8 and 9 March 2007. In this context, the European Council also endorsed a higher EU objective of a 30% reduction in greenhouse gas emissions by 2020 compared to 1990 as its contribution to a global, comprehensive and sufficiently ambitious agreement for the period beyond 2012. Furthermore, Member States are obliged to adopt and aim to achieve an overall national indicative energy savings target of 9% over nine years\(^8\). State aid may be appropriate where the investments resulting in energy savings are not compulsory pursuant to applicable Community standards, and where they are not profitable, that is to say where the cost of energy saving is higher than the related private economic benefit. In the case of SMEs, more favourable support may be needed to take into account the fact that SMEs often underestimate the benefits related to energy savings over long periods, which leads to under-investment in energy-saving measures by SMEs.

### 1.5.5. Aid for renewable energy sources

This type of aid addresses the market failure linked to negative externalities by creating individual incentives to increase the share of renewable sources of energy in total energy production. Increased use of renewable energies such as wind power, solar energy, hydropower and biomass is one of the Community's environmental priorities as well as an economic and energy-related priority. It is expected to play an important role in meeting the targets for the reduction of greenhouse gas emissions. At Community level the target is for renewable energy to account for 20% of overall EU energy consumption by 2020\(^9\). State aid may be justified if the cost of production of renewable energy is higher than the cost of production based on conventional sources and if there is no mandatory Community standard concerning the share of energy from renewable sources for individual producers or consumers. The high cost of production of some types of renewable energy does not allow undertakings to charge competitive prices on the market and thus creates a market-access barrier for renewable energy. However, due to technological developments in the field of renewable energy and to gradually increasing internalisation of environmental externalities (resulting, for example, from the IPPC Directive\(^10\), air quality legislation, energy taxation and the emissions trading scheme), the cost difference has shown a decreasing trend over the past years, thus reducing the need for aid. In addition, as highlighted in the Biofuel Progress Report, biofuel promotion should benefit both security of supply and climate change policy in a sustainable way\(^11\). Therefore, State aid may be an appropriate


\(^{9}\) COM(2007) 1 final.


\(^{11}\) On 30 April 2007, the European Commission launched a public consultation on "biofuel issues in the new legislation on the promotion of renewable energy", addressing issues such as how to achieve a 10% biofuel share and how to ensure environmental sustainability. The consultation was aimed at helping the Commission draft proposals on incorporating these targets into legislation. The Commission will take into consideration the results of this consultation when drafting the final version of these guidelines.
instrument only for those uses of renewable energy sources where the environmental benefit and sustainability is evident.

1.5.6. Aid for the cogeneration of heat and electricity (CHP) and aid for district heating (DH)

44. These types of aid address the market failure linked to negative externalities by creating individual incentives to meet environmental targets in the field of energy savings. CHP is the most efficient way of producing electricity and heat simultaneously. By producing both electricity and heat together, less energy is wasted in production. The Community strategy outlined in the Commission's cogeneration strategy of 1997 sets an overall indicative target of doubling the share of electricity production from cogeneration to 18% by 2010. Since then the importance of CHP for the EU energy strategy has been underlined by the adoption of a Directive on the promotion of cogeneration in 2004\(^{12}\) and by a chapter on cogeneration in the Energy Efficiency Action Plan\(^{13}\) in 2006. The latter document also points to the potential of waste heat, for example from industry or utilities, for useful applications, for example in DH. Further, DH may be more energy-efficient than individual heating and may provide a significant improvement in urban air quality. Therefore, provided that DH is shown to be less polluting and more energy efficient in the generation process and the distribution of the heat but more costly than individual heating, State aid can be granted with a view to giving incentives to attain environmental targets. However, as in the case of renewable energies, the progressive internalisation of environmental externalities in the costs of other technologies can be expected to reduce the need for aid by bringing about a gradual convergence of these costs with those of CHP and DH.

1.5.7. Aid for waste management\(^{14}\)

45. This kind of aid aims to give individual incentives to reach environmental targets linked to waste management. The Sixth Community Environment Action Programme\(^{15}\) identifies waste prevention and management as one of the four top priorities. Its primary objective is to separate waste generation from economic activity, so that EU growth will not lead to more and more waste. In this context, State aid may be granted to the producer of the waste (under section 3.1.1.) as well as to undertakings managing or recycling waste created by other undertakings (under section 3.1.8.). However, the positive effects on the environment must be ensured, the PPP must not be circumvented and the normal functioning of secondary materials markets should not be distorted.

1.5.8. Aid for the remediation of contaminated sites

46. This kind of aid is intended to create an individual incentive to counterbalance the effects of negative externalities, where it is not possible to identify the polluter and make it pay for repairing the environmental damage it has caused. In such cases, State

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\(^{13}\) COM(2006) 545 final.

\(^{14}\) Waste management includes re-utilisation, recycling and recovery.

aid may be justified if the cost of remediation is higher than the resulting increase in the value of the site.

1.5.9. Aid for the relocation of undertakings

47. This kind of investment aid aims to create individual incentives to reduce negative externalities by relocating undertakings that create major pollution to areas where such pollution will have a less damaging effect, in other words, reduced external costs. In line with the precautionary principle, these guidelines introduce the possibility of granting aid for the relocation of high risk establishments in accordance with Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances\(^\text{16}\) (the "Seveso II Directive"). Past accidents have shown that the location of an establishment covered by the Seveso II Directive is of crucial importance as regards both the prevention of accidents and limitation of the consequences of accidents on people and the environment. State aid may therefore be justified if the relocation is made for environmental reasons. To avoid allowing aid for relocation for other purposes, a decision of a competent public authority to relocate the firm is required. The eligible costs must be reduced in order to take into account any advantages that the firm may obtain due to the relocation.

1.5.10. Aid in the form of tax reductions or exemptions

48. This type of aid may be used to target negative externalities indirectly by facilitating the introduction of higher national environmental taxation. Tax reductions and exemptions may make it feasible to adopt higher taxes for other undertakings thus resulting in an overall improvement of cost internalisation and of the level of environmental protection. In order to limit the possible distortion of competition caused by tax reductions and exemptions, except as regards beneficiaries with demonstrably irreducible consumption or emission levels, the beneficiaries should as a counterpart either pay a significant amount of the national tax or enter into environmental agreements to reduce pollution. For taxes that are harmonised at Community level, no counterparts will be required if the tax paid is at least equal to the Community minimum.

1.5.11. Aid involved in tradable permit schemes

49. Tradable permit schemes may involve State aid in various ways, e.g. when Member States grant permits and allowances below their market value. This type of aid may be used to target negative externalities by enabling the introduction of market-based instruments targeting environmental objectives. If the global amount of permits granted by the Member State is lower than the global expected needs of undertakings, the overall effect on the level of environmental protection will be positive. At the individual level of each undertaking, if the allowances granted do not cover the totality of expected needs of the undertaking, the undertaking must either reduce its pollution (and thus contribute to improving the level of environmental protection) or buy supplementary allowances on the market (and thus pay a counterpart for its pollution).

To limit the effects on distortion of competition, no over-allocation of allowances can be justified and provision must be made to avoid undue barriers to entry\textsuperscript{17}.

2. **SCOPE OF APPLICATION AND DEFINITIONS**

2.1. **Scope of application of the guidelines**

50. These guidelines apply to State aid for environmental protection. They will be applied in accordance with other Community policies on State aid, other provisions of the Treaty establishing the European Community and the Treaty on European Union and legislation adopted pursuant to those Treaties.

51. These guidelines apply to aid\textsuperscript{18} to support environmental protection in all sectors governed by the EC Treaty. They also apply to those sectors which are subject to specific Community rules on State aid (steel processing, shipbuilding, motor vehicles, synthetic fibres, transport, coal agriculture and fisheries) unless such specific rules provide otherwise.

52. The design and manufacture of environmentally friendly products, machines or means of transport which can be operated with fewer natural resources and action taken within plants or other production units with a view to improving safety or hygiene are not covered by these guidelines.

53. For agriculture and fisheries, these guidelines apply to aid for environmental protection in favour of undertakings active in the processing and marketing of products. For undertakings active in the processing and marketing of fisheries products, if the aid concerns expenses eligible under Council Regulation (EC) No 1198/2006 on the European Fisheries Fund\textsuperscript{19}, the maximum aid rate allowed is the highest of either the aid rate provided for in these guidelines or the aid rate laid down in that Regulation. In the field of agricultural primary production, these guidelines apply only to measures which are not already governed by the Community guidelines for State aid in the agriculture and forestry sector 2007-2013, and in the field of fisheries and aquaculture primary production they apply only where no specific provisions dealing with environmental aid exist.

54. The financing of environmental protection measures relating to air, road, railway, inland waterway and maritime transport infrastructure, including any project of common interest as identified in the Community guidelines for the development of the trans-European transport network (Decision No 1692/96/EC) is not covered by these guidelines.

55. State aid for research, development and innovation in the environmental field is subject to the rules set out in the Community framework for State aid for research and

\textsuperscript{17} The Commission may review the conditions or criteria for compatibility of such tradable permit schemes in the light of developments in the underlying environmental policies. In particular, these provisions may be reviewed by the Commission when the proposal for the new Directive on the EU CO2 Emission Trading System for the trading period after 2012 is adopted by the Commission.

\textsuperscript{18} These guidelines do not discuss the concept of State aid, which derives from Article 87(1) of the EC Treaty and from the case law of the Court of Justice and the Court of First Instance.

development and innovation\textsuperscript{20}. However, the market diffusion stage of eco-innovation (acquisition of an eco-innovation asset) is covered by these guidelines.

56. The characteristics of aid for environmental training activities do not justify separate rules, and the Commission will therefore examine such aid in accordance with Commission Regulation (EC) No 68/2001 of 12 January 2001 on the application of Articles 87 and 88 of the EC Treaty to training aid\textsuperscript{21}.

57. Consultancy services play an important role in helping SMEs to make progress in environmental protection. In particular, they can be used to evaluate the economic benefits of an environmentally friendly investment for the undertaking and thus give an incentive to SMEs to undertake the investment supporting environmental protection. Aid to SMEs for advisory/consultancy services in the environmental field may be granted under Regulation (EC) No 70/2001 of 12 January 2001 on the application of Articles 87 and 88 of the EC Treaty to State aid for small and medium-sized enterprises\textsuperscript{22}.

58. These guidelines do not apply to stranded costs as defined in the Commission Communication relating to the methodology for analysing State aid linked to stranded costs\textsuperscript{23}.

59. Some of the means to support fossil fuel power plants or other industrial installations equipped with CO\textsubscript{2} capture, transport and storage facilities, or individual elements of this CCS chain, envisaged by Member States could constitute State aid but, considering the lack of experience, it is too early to lay down guidelines for authorising any such aid. Considering the strategic importance of this technology for the EU in terms of energy security, reducing greenhouse gas emissions and meeting its agreed long-term objective to limit climate change to 2\textdegree C above pre-industrial levels and its stated support for the construction of industrial-scale demonstration plants up to 2015, provided that they are environmentally safe, projects could be assessed under Article 87(3)(c) of the Treaty, or eligible as important projects of common European interest under the conditions set out in Article 87(3)(b) and point 134 of the present guidelines.

2.2. Definitions

60. For the purpose of these guidelines the following definitions shall apply:

(a) "Environmental protection" means any action designed to remedy or prevent damage to physical surroundings or natural resources by a beneficiary’s own activities, to reduce the risk of such damage or to lead to more efficient use of


\textsuperscript{21} OJ L 10, 13.1.2001, p. 20. When the new block exemption regulation covering training aid is adopted, the new regulation will apply.

\textsuperscript{22} OJ L 10, 13.1.2001, p. 33. When the new block exemption regulation covering aid to SMEs is adopted, the new regulation will apply.

natural resources, including energy-saving measures and the use of renewable sources of energy. See in particular the Sixth Environment Programme of the European Community 2002-2012.

(b) "Energy-saving measures" means action which enables undertakings to reduce the amount of energy used in their production cycle.

(c) "Community standard" means
   (i) a mandatory Community standard setting the levels to be attained in environmental terms by individual undertakings, and
   (ii) the obligation under Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control to use the best available techniques as set out in the most recent relevant information published by the Commission pursuant to Article 16(2) of the Directive.

(d) "Eco-innovation" means all forms of innovation activities resulting in or aimed at significantly improving environmental protection. Eco-innovation includes new production processes, new products or services, and new management and business methods, whose use or implementation is likely to prevent or substantially reduce the risks for the environment, pollution and other negative impacts of resources use, throughout the life cycle of related activities.

In line with the Commission's approach in the area of innovation, minor changes or improvements, an increase in production or service capabilities through the addition of manufacturing or logistical systems which are very similar to those already in use, changes in business practices, workplace organisation or external relations that are based on organisational methods already in use in the undertaking, changes in management strategy, mergers and acquisitions, ceasing to use a process, simple capital replacement or extension, changes resulting purely from changes in factor prices, customisation, regular seasonal and other cyclical changes, and trading of new or significantly improved products are not considered innovations.

(e) "Renewable energy sources" means renewable non-fossil energy sources (wind, solar, geothermal, wave, tidal, hydropower installations, biomass, landfill gas, sewage treatment plant gas and biogases).

(f) "Biomass" means the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste.

(g) "Energy production from renewable energy sources" means energy produced by plants using only renewable energy sources, as well as the share in terms of calorific value of energy produced from renewable energy sources in hybrid plants which also use conventional energy sources. It includes renewable electricity used for filling storage systems, but excludes electricity produced as a result of storage systems.

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24 See in particular the Sixth Environment Programme of the European Community 2002-2012.


"Cogeneration" means the simultaneous generation in one process of thermal energy and electrical and/or mechanical energy.  


"District heating" means the supply of heat, either in the form of steam or hot water, from a central source of production through a transmission and distribution system to multiple buildings, for the purpose of heating.  

"Energy-efficient district heating" means district heating installations which for the generation part either comply with the criteria for high-efficiency cogeneration or, in the case of heat-only boilers, at least meet the reference values for separate heat production laid down in Commission Decision 2007/74/EC in accordance with Directive 2004/8/EC.  

"Environmental tax" means a tax whose specific taxable base has a clear negative effect on the environment or which seeks to tax certain activities, goods or services so that the environmental costs may be included in their price and/or so that producers and consumers are oriented towards activities which better respect the environment.  

"Community minimum tax level" means the minimum level of taxation provided for in Community legislation. For energy products and electricity, the Community minimum tax level shall be considered to be the minimum level of taxation laid down in Annex I to Council Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity.  

"Small and medium-sized enterprises" (hereafter "SMEs"), "small enterprises" and "medium-sized enterprises" (or "undertakings") mean such undertakings within the meaning of Commission Regulation (EC) No 70/2001 or any regulation replacing it.  

"Large enterprises" means undertakings which are not within the definition of small and medium-sized enterprises.  

"Aid" means any measure fulfilling all the criteria laid down in Article 87(1) of the EC Treaty.  

"Aid intensity" means the gross aid amount expressed as a percentage of the eligible costs. All figures used shall be taken before any deduction of tax or other charge. Where aid is awarded in a form other than a grant, the aid amount shall be the grant equivalent of the aid. Aid payable in several instalments shall be calculated at its value at the moment of granting. The interest rate to be used for

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discounting purposes and for calculating the aid amount in a soft loan shall be the reference rate applicable at the time of grant. The aid intensity is calculated per beneficiary.

(r) "Internalisation of costs" means the principle that all costs associated with the protection of the environment should be included in undertakings' production costs.

(s) "The polluter pays principle" means that the costs of measures to deal with pollution should be borne by the polluter who causes the pollution, unless the person responsible for the pollution cannot be identified or cannot be held liable under Community or national legislation or may not be made to bear the costs of remediation. Pollution in this context is the damage caused by the polluter by directly or indirectly damaging the environment, or by creating conditions leading to such damage, to physical surroundings or natural resources.

(t) "Polluter" means someone who directly or indirectly damages the environment or who creates conditions leading to such damage.

(u) "Contaminated site" means a site where there is a confirmed presence, caused by man, of dangerous substances of such a level that they pose a significant risk to human health or the environment taking into account current and approved future use of the land.

3. Compatibility of aid under Article 87(3) of the EC Treaty

3.1. Compatibility of aid under Article 87(3)(c) of the EC Treaty

61. State aid for environmental protection shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty if, on the basis of the balancing test, it leads to increased environmental protection activities without adversely affecting trading conditions to an extent contrary to the common interest. In this context, the duration of aid schemes should be subject to reasonable time limits, without prejudice to the possibility for a Member State to re-notify a measure after the time limit set by the Commission decision has passed. The Commission will welcome notifications of aid measures which are supported by rigorous evaluations of similar past aid measures demonstrating the incentive effect of the aid.

The following measures may be found to be compatible under Article 87(3)(c) EC.

3.1.1. Aid for undertakings improving on Community standards or increasing the level of environmental protection in the absence of Community standards

62. Investment aid enabling undertakings to improve on Community standards or on environmental protection in the absence of Community standards will be considered


compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty provided that the conditions set out in this section are fulfilled.

63. The aided investment shall fulfill one of the following two conditions:

   (a) The investment enables the beneficiary to reduce the pollution resulting from its activities by improving on the applicable Community standards, irrespective of the presence of mandatory national standards that are more stringent than the Community standard, or
   (b) The investment enables the beneficiary to reduce the pollution resulting from its activities in the absence of Community standards.

64. Aid may not be granted where improvements bring companies into line with Community standards already adopted and not yet in force\(^\text{34}\).

**Aid intensity**

65. The aid intensity, as calculated on the basis of the eligible costs of the project, shall not exceed 50\% gross of the eligible investment cost as defined in points 68 to 72.

66. Where the investment concerns the acquisition of an eco-innovation asset or the launching of an eco-innovation project, the aid intensity may be increased by 10 percentage points, provided that following conditions are fulfilled:

   (a) The eco-innovation asset or project must be new or substantially improved compared to the state of the art in its industry in the Community. The novelty could for example be demonstrated by the Member States on the basis of a precise description of the innovation and of market conditions for its introduction or diffusion, comparing it with state-of-the-art processes or organisational techniques generally used by other undertakings in the same industry.

   (b) The expected environmental benefit shall be significantly higher than the improvement resulting from the general evolution of the state of the art in comparable activities\(^\text{35}\).

   (c) The innovative character of these assets or projects involves a clear degree of risk, in technological, market or financial terms, which is higher than the risk generally associated with comparable non-innovative assets or projects. This

\(^{34}\) However, for SMEs and the transport sector this aid is possible under the conditions developed in sections 3.1.3. and 3.1.2.

\(^{35}\) When assessing point 66(b), if quantitative parameters can be used to compare eco-innovative activities with standard, non-innovative activities, "significantly higher" means that the marginal improvement expected from eco-innovative activities, in terms of reduced environmental risk or pollution, or improved efficiency in energy or resources, should be at least twice as high as the marginal improvement expected from the general evolution of comparable non-innovative activities.

Where the proposed approach is not appropriate for a given case, or if no quantitative comparison is possible, the application file for State aid should contain a detailed description of the method used to assess this criterion, ensuring a standard comparable to that of the proposed method.
risk could be demonstrated by the Member State for instance in terms of: costs in relation to company turnover, time required for the development, expected gains from the eco-innovation in comparison with the costs, probability of failure.

67. Where the investment aid for undertakings improving on Community standards or in the absence of such Community standards is to be given to SMEs, the aid intensity may be increased by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises, as set out in the table.

<table>
<thead>
<tr>
<th>Eligible costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>68. Eligible costs must be limited to the extra investment costs necessary to achieve a level of environmental protection higher than the level required by the Community standards.</td>
</tr>
<tr>
<td>69. Identifying the part of the investment directly related to environmental protection:</td>
</tr>
<tr>
<td>(a) Where the cost of investing in environmental protection can be easily identified in the total investment cost, this precise environmental protection-related cost constitutes the eligible costs.</td>
</tr>
<tr>
<td>(b) Where the cost of investing in environmental protection cannot be easily identified in the total investment cost, the cost of a technically comparable investment that provides a lower degree of environmental protection (corresponding to mandatory Community standards, if they exist) and that would be realised without aid must be deducted from the eligible costs. Technically comparable investment means an investment with the same production capacity and all other technical characteristics. Where the investment increases the production capacity, the eligible costs include only costs corresponding to the original capacity and must be calculated net of the benefits accruing from any increase of capacity.</td>
</tr>
<tr>
<td>70. Identifying costs incurred in order to obtain a level of environmental protection higher than Community standards:</td>
</tr>
</tbody>
</table>
(a) Where the undertaking is adapting to national standards adopted in the absence of Community standards, the eligible costs consist of the additional investment costs necessary to achieve the level of environmental protection required by the national standards.

(b) Where the undertaking is adapting to or goes beyond national standards which are more stringent than the Community standards or undertakes a voluntary improvement on Community standards, the eligible costs consist of the additional investment costs necessary to achieve a level of environmental protection higher than the level required by the Community standards. The cost of investments needed to reach the level of protection required by the Community standards is not eligible.

(c) Where no standards exist, eligible costs consist of the investment costs necessary to achieve a higher level of environmental protection than that which the undertaking or undertakings in question would achieve in the absence of any environmental aid.

71. Identifying operating benefits/costs: eligible costs must be calculated net of any operating benefits and costs related to the extra investment for environmental protection and arising during the first five years of the life of this investment.

Operating benefits shall mean particularly benefits accruing from any increase in capacity (increase in net income, decrease in production costs due to economies of scale), cost savings or additional ancillary production.

Operating costs shall mean particularly additional production costs.

72. The eligible investment may take the form of investment in tangible assets and/or in intangible assets.

Investments in tangible assets are investments in land which are strictly necessary in order to meet environmental objectives, investments in buildings, plant and equipment intended to reduce or eliminate pollution and nuisances, and investments to adapt production methods with a view to protecting the environment. Eligible costs can include preparatory studies linked directly to the investment.

Investment in intangible assets which means spending on technology transfer through the acquisition of operating licences or of patented and non-patented know-how may also qualify where the following conditions are complied with:

(a) It must be regarded as a depreciable asset;

(b) It must be purchased on market terms, from an undertaking in which the acquirer has no power of direct or indirect control;

(c) It must be included in the assets of the undertaking, and remain in the establishment of the recipient of the aid and be used there for at least five years. This condition does not apply if the intangible asset is technically out of date. If it is sold during those five years, the yield from the sale must be deducted from the eligible costs and all or part of the amount of aid must, where appropriate, be reimbursed.
3.1.2. *Aid for undertakings improving on Community standards or increasing the level of environmental protection in the absence of Community standards in the transport sector*

73. The general rules set out in the previous section (section 3.1.1.), including aid intensities and eligible costs, apply to aid for undertakings improving on Community standards or increasing the level of environmental protection in the absence of Community standards in the transport sector. Aid for acquisition of new transport vehicles for road, railway, inland waterway and maritime transport complying with adopted Community standards is permissible, when such acquisition occurs before their entry into force and where the new Community standards, once mandatory, will not apply retroactively to already purchased vehicles.

Eligible costs in cases of retrofitting operations with an environmental protection objective in the transport sector are the total net costs involved (respecting the definition of eligible costs set out in the previous section) if the existing means of transport are upgraded to environmental standards that were not yet in force at the date of entry into operation of those means of transport or if the means of transport are not subject to any environmental standards.

3.1.3. *Aid for SMEs for early adaptation to future Community standards*

74. Aid for SMEs for complying with new Community standards which improve on environmental protection and are not yet in force shall be considered compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty if the Community standards have been adopted, provided that the investment is implemented and finalised at least one year before the mandatory date of transposition.

*Aid intensity*

75. The maximum aid intensities are 25% for small enterprises and 20% for medium-sized enterprises if the implementation and finalisation take place more than three years before the mandatory date of transposition and 20% for small enterprises and 15% for medium-sized enterprises if the implementation and finalisation take place between one and three years before the mandatory date of transposition.

<table>
<thead>
<tr>
<th>Aid intensity for aid for SMEs for early adaptation to Community standards when the implementation and finalisation take place:</th>
<th>More than three years before the mandatory date of transposition</th>
<th>Between one and three years before the mandatory date of transposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small enterprises</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>Medium-sized enterprises</td>
<td>20%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Eligible costs

76. Eligible costs must be limited to the extra investment costs necessary to achieve the level of environmental protection required by the Community standard compared to the existing level of environmental protection required prior to the entry into force of this standard. The calculation of extra costs must comply with points 69 and 71 of these guidelines.

77. The eligible investment costs may take the form of investment in tangible assets and/or in intangible assets, as set out in point 72 of the present guidelines.

3.1.4. Aid for energy saving

78. Investment and/or operating aid enabling undertakings to achieve energy savings shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty, if the following conditions are fulfilled:

3.1.4.1. Investment aid

Aid intensity

79. The aid intensity shall not exceed 60% of the eligible investment costs.

80. Where the investment aid for energy saving is to be given to SMEs, the aid intensity may be increased by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises, as set out in the table.

<table>
<thead>
<tr>
<th></th>
<th>Aid intensity for energy saving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small enterprises</td>
<td>80%</td>
</tr>
<tr>
<td>Medium-sized</td>
<td>70%</td>
</tr>
<tr>
<td>Large enterprises</td>
<td>60%</td>
</tr>
</tbody>
</table>

Eligible costs

81. Eligible costs must be limited to the extra investment costs necessary to achieve energy savings beyond the level required by the Community standards.

The calculation of extra costs must respect the following rules:

(a) The part of the investment directly related to energy saving must be identified in accordance with the rules laid down in point 69 of these guidelines.

(b) A level of energy saving higher than Community standards must be identified in accordance with the rules laid down in point 70 of these guidelines.
(c) **Identifying operating benefits/costs:** eligible costs must be calculated net of any operating benefits and costs related to the extra investment for energy saving and arising during the first five years of the life of this investment in the case of large undertakings and during the first three years of the life of this investment in the case of SMEs:

i. operating benefits shall mean particularly benefits accruing from cost savings (due to lower energy consumption and other savings), operating aid granted for the same eligible costs, any increase in capacity (increase in net income, decrease in production costs due to economies of scale) or additional ancillary production;

ii. operating costs shall mean particularly additional production costs.

82. The eligible investment costs may take the form of investment in tangible assets and/or in intangible assets, as set out in point 72 of these guidelines.

3.1.4.2. **Operating aid**

83. Operating aid for energy saving shall only be granted if the following conditions are met:

(a) The aid is limited to compensating for net extra production costs, taking account of benefits resulting from energy saving, in comparison with the market prices of the relevant products and services\(^{36}\). In determining the amount of operating aid, any investment aid granted to the undertaking in question in respect of the new plant must be deducted from production costs.

(b) The aid is subject to a limited duration of five years.

84. In the case of aid which is gradually reduced, the aid intensity shall not exceed 100% of the extra costs in the first year but must have fallen in a linear fashion to zero by the end of the fifth year. In the case of aid which does not decrease gradually, the aid intensity shall not exceed 50% of the extra costs.

3.1.5. **Aid for renewable energy sources**

85. Environmental investment and/or operating aid for the promotion of energy from renewable sources shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty, if the following conditions are fulfilled.

3.1.5.1. **Investment aid**

*Aid intensity*

86. The aid intensity shall not exceed 60% of the eligible investment costs. For biomass the aid intensity shall not exceed 50%.

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\(^{36}\) The concept of production costs must be understood as being net of any aid but inclusive of a normal level of profit.
87. Where the investment aid for renewable energy sources is to be given to SMEs, the aid intensity may be increased by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises, as set out in the table.

<table>
<thead>
<tr>
<th></th>
<th>Aid intensity for renewable energy sources</th>
<th>Aid intensity for biomass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small enterprises</td>
<td>80%</td>
<td>70%</td>
</tr>
<tr>
<td>Medium-sized enterprises</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>Large enterprises</td>
<td>60%</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Eligible costs**

88. For renewable energy, eligible investment costs must be limited to the extra investment costs borne by the beneficiary compared with a conventional power plant or with a conventional heating system with the same capacity in terms of the effective production of energy. Nuclear installations shall not be considered to be conventional power plants for the purposes of this calculation.

89. Eligible costs must be calculated net of any operating benefits and costs related to the extra investment for renewable sources of energy and arising during the first five years of the life of this investment:

   (a) operating benefits shall mean particularly benefits accruing from any increase in capacity (increase in net income, decrease in production costs due to economies of scale), cost savings or additional ancillary production and benefits accruing from other support measures whether they constitute State aid or not (operating aid granted for the same eligible costs, feed-in tariffs or other support measures);

   (b) operating costs shall mean particularly additional production costs.

90. The eligible investment costs may take the form of investment in tangible assets and/or in intangible assets, as set out in point 72.

3.1.5.2. Operating aid

91. Operating aid for the production of renewable energy may be justified in order to cover the difference between the cost of producing energy from renewable energy sources and the market price.

92. Member States may grant aid for renewable energy sources as follows:

93. **Option 1:**

   (a) Member States may grant operating aid to compensate for the difference between the production cost of renewable energy and the market price of the form of energy concerned. Operating aid may then be granted until the plant
has been fully depreciated according to normal accounting rules. Any further energy produced by the plant will not qualify for any assistance. However, the aid may also cover a normal return on capital if Member States can show that this is indispensable given the poor competitiveness of certain renewable energy sources.

(b) In determining the amount of operating aid, any investment aid granted to the undertaking in question in respect of the new plant must be deducted from production costs.

(c) When notifying aid schemes to the Commission, Member States must state the precise support mechanisms and in particular the methods of calculating the amount of aid.

(d) Unlike most other renewable sources of energy, biomass requires relatively low investment costs, but higher operating costs. The Commission will, therefore, be amenable to operating aid exceeding the amount of investment where Member States can show that the aggregate costs borne by the undertakings after plant depreciation are still higher than the market prices of the energy.

94. **Option 2:**

(a) Member States may grant support for renewable energy sources by using market mechanisms such as green certificates or tenders. These systems allow all renewable energy producers to benefit indirectly from guaranteed demand for their energy, at a price above the market price for conventional power. The price of these green certificates is not fixed in advance but depends on supply and demand.

(b) Where they constitute State aid, these systems may be authorised by the Commission if Member States can show that support is essential to ensure the viability of the renewable energy sources concerned, does not in the aggregate result in overcompensation and does not dissuade renewable energy producers from becoming more competitive. The Commission will authorise such aid systems for a period of ten years.

3.1.6. **Aid for cogeneration**

95. Environmental investment and/or operating aid for cogeneration shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty, provided that the cogeneration unit satisfies the definition of high-efficiency cogeneration set out in point 60(i), and that:

(a) a new cogeneration unit will overall make primary energy savings compared to separate production as defined by Directive 2004/8/EC and Commission Decision 2007/74/EC;

(b) improvement of an existing cogeneration unit or conversion of an existing power generation unit into a cogeneration unit will result in primary energy savings compared to the original situation.
3.1.6.1. Investment aid

Aid intensity

96. The aid intensity shall not exceed 60% of the eligible investment costs.

97. Where the investment aid for cogeneration is to be given to SMEs, the aid intensity may be increased by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises, as set out in the table.

<table>
<thead>
<tr>
<th>Aid intensity for high-efficiency cogeneration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small enterprises</td>
</tr>
<tr>
<td>Medium-sized enterprises</td>
</tr>
<tr>
<td>Large enterprises</td>
</tr>
</tbody>
</table>

Eligible costs

98. Eligible costs must be limited to the extra investment costs necessary to realise a high-efficiency cogeneration plant. Alternative investment that would be realised without aid must be deducted from the eligible costs.

99. Eligible costs must be calculated in accordance with the rules applicable to eligible costs for renewable energy laid down in point 89.

100. The eligible investment costs may take the form of investment in tangible assets and/or in intangible assets, as set out in point 72.

3.1.6.2. Operating aid

101. Operating aid for high-efficiency cogeneration may be granted in accordance with the rules for operating aid for renewable energy laid down in section 3.1.5.2.:

(a) to undertakings distributing electric power and heat to the public where the costs of producing such electric power or heat exceed its market price. The decision as to whether the aid is essential will take account of the costs and revenue resulting from the production and sale of the electric power or heat;

(b) for the industrial use of the combined production of electric power and heat where it can be shown that the production cost of one unit of energy using that technique exceeds the market price of one unit of conventional energy. The production cost may include the plant's normal return on capital, but any gains by the undertaking in terms of heat production must be deducted from production costs.

3.1.7. Aid for district heating

102. Environmental investment aid in energy efficient-district heating installations shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC
Treaty, provided that it leads to primary energy savings and that the beneficiary district heating installation satisfies the definition of energy efficient district heating set out in point 60(k) and that:

(a) the combined operation of the generation of heat (and electricity in the case of cogeneration) as well as the distribution of heat will result in primary energy savings, or

(b) the investment is meant for the use and distribution of waste heat for district heating purposes.

**Aid intensity**

103. The aid intensity for district heating installations shall not exceed 50% of the eligible investment costs. If the aid is meant for just the generation part of a district heating installation, energy-efficient district heating installations using renewable sources of energy or cogeneration will be covered by the rules set out in sections 3.1.5. and 3.1.6. respectively.

104. Where the investment aid for energy-efficient district heating is to be given to SMEs, the aid intensity may be increased by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises, as set out in the table.

<table>
<thead>
<tr>
<th>Eligible enterprises</th>
<th>Aid intensity for energy-efficient district heating using conventional sources of energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small enterprises</td>
<td>70%</td>
</tr>
<tr>
<td>Medium-sized enterprises</td>
<td>60%</td>
</tr>
<tr>
<td>Large enterprises</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Eligible costs**

105. Eligible costs must be limited to the extra investment costs necessary to realise an investment leading to energy-efficient district heating. Alternative investment that would be realised without aid must be deducted from the eligible costs.

106. Eligible costs must be calculated in accordance with the rules laid down in point 69-71.

107. The eligible investment costs may take the form of investments in tangible assets and/or in intangible assets, as set out in point 72.
3.1.8. **Aid for waste management**

108. Environmental investment aid for the management of waste of other undertakings, including activities of re-utilisation, recycling and recovery, shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty, provided that such management is in line with the hierarchical classification of the principles of waste management\(^{37}\) and is in accordance with the conditions set out in point 109.

109. Investment aid for waste management shall only be granted if each of the following conditions are met:

   (a) the investment is aimed at reducing pollution generated by other undertakings ("polluters") and does not extend to pollution generated by the beneficiary of the aid;

   (b) the aid does not indirectly relieve the polluters from a burden that should be borne by them under Community law, or from a burden that should be considered as a normal company cost for the polluters;

   (c) the investment goes beyond the "state of the art"\(^{38}\) or uses conventional technologies in an innovative manner;

   (d) the treated materials would otherwise be disposed of, or be treated in a less environmentally friendly manner;

   (e) the investment does not merely increase demand for the materials to be recycled without increasing collection of those materials.

**Aid intensity**

110. The aid intensity shall not exceed 50% of the eligible investment costs.

111. Where the investment aid for waste management is to be given to SMEs, the aid intensity may be increased by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises, as set out in the table.

<table>
<thead>
<tr>
<th></th>
<th>Aid intensity for waste management</th>
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</thead>
<tbody>
<tr>
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<td>Medium-sized enterprises</td>
<td>60%</td>
</tr>
</tbody>
</table>

\(^{37}\) Classification given in the Community strategy for waste management (COM(96) 399 final, 30.7.1996). In that communication, the Commission stresses that waste management is a priority objective for the Community in order to reduce the risks to the environment. The concept of waste treatment must be looked at from three angles: re-utilisation, recycling and recovery. Waste whose production is unavoidable must be treated and eliminated without danger. In its Communication on a Thematic Strategy for the prevention and recycling of waste (COM(2005) 666), the Commission reiterated its commitment to these principles and allows for concrete measures towards promoting prevention and recycling.

\(^{38}\) "State of the art" shall mean a process in which the use of a waste product to manufacture an end product is economically profitable normal practice. Where appropriate, the concept of "state of the art" must be interpreted from a European technological and common market perspective.
Eligible costs

112. Eligible costs must be limited to the extra investment costs necessary to realise an investment leading to waste management and borne by the beneficiary compared to conventional production not involving waste management with the same capacity. The cost of such conventional investment must be deducted from the eligible cost.

113. Eligible costs must be calculated net of any operating benefits and costs related to the extra investment for waste management and arising during the first five years of the life of this investment:

- Operating benefits shall mean particularly benefits accruing from any increase in capacity (increase in net income, decrease in production costs due to economies of scale), cost savings, additional ancillary production or operating aid granted for the same eligible costs;
- Operating costs shall mean particularly additional production costs.

114. The eligible investment costs may take the form of investment in tangible assets and/or in intangible assets, as set out in point 72.

3.1.9. Aid for the remediation of contaminated sites

115. Investment aid to undertakings repairing environmental damage by remediating contaminated sites shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty provided that it leads to an improvement of environmental protection. The environmental damage concerned may be damage to the quality of the soil or of surface water or groundwater.

Where the polluter is clearly identified, that person must finance the remediation in accordance with the "polluter pays" principle, and no State aid may be granted. In this context, "polluter" refers to the person liable under the law applicable in each Member State, without prejudice to the adoption of Community rules in the matter.

Aid may therefore only be granted where the polluter cannot be identified or cannot be held liable under Community or national legislation.

39 If the investments are concerned solely with environmental protection without any other economic benefits, no additional reduction will be applied in determining the eligible costs.

40 Remediation work carried out by public authorities on their own land is not as such subject to Article 87 of the Treaty. Problems of State aid may, however, arise if the land is sold after remediation at a price below its market value. In this respect, the Commission Communication on "State aid elements in sales of land and buildings by public authorities" (OJ C 209, 10.7.1997, p. 3) is still applicable.

41 All expenditure incurred by an undertaking in remediating its site, whether or not such expenditure can be shown as a fixed asset on its balance sheet, ranks as eligible investment in the case of the remediation of contaminated sites.
Aid intensity

116. Aid for the remediation of contaminated sites may amount to up to 100% of the eligible costs. The total amount of aid may under no circumstances exceed the actual expenditure incurred by the undertaking.

Eligible costs

117. The eligible costs are equal to the cost of the remediation work less the increase in the value of the land.

3.1.10. Aid for the relocation of undertakings

118. Investment aid for relocation of undertakings to new sites for environmental protection reasons shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty provided that the following conditions are met:

(a) The change of location must be dictated by environmental protection or prevention grounds and must have been ordered by the administrative or judicial decision of a competent public authority or agreed between the undertaking and the competent public authority.

(b) The undertaking must comply with the strictest environmental standards applicable in the new region where it is located.

119. The beneficiary can be:

(a) an undertaking established in an urban area or in a Natura 2000 designated area, which lawfully carries out (i.e. complies with all legal requirements including all environmental standards applicable to it) an activity that creates major pollution and must, on account of this location, move from its place of establishment to a more suitable area, or

(b) an establishment or installation falling within the scope of the Seveso II Directive.

Aid intensity

120. The aid intensity shall not exceed 50% of the eligible investment costs. The aid intensity may be increased by 10 percentage points for medium-sized enterprises and by 20 percentage points for small enterprises, as set out in the table.

<table>
<thead>
<tr>
<th>Aid intensity for relocation</th>
<th></th>
</tr>
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<tbody>
<tr>
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<td>70%</td>
</tr>
<tr>
<td>Medium-sized enterprises</td>
<td>60%</td>
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<tr>
<td>Large enterprises</td>
<td>50%</td>
</tr>
</tbody>
</table>
Eligible costs

121. In order to determine the amount of eligible costs in the case of relocation aid, the Commission will take into account, in particular:

(a) The following benefits:
   i. the yield from the sale or renting of the plant or land abandoned;
   ii. the compensation paid in the event of expropriation;
   iii. any other gains connected with the transfer of the plant, notably gains resulting from an improvement, on the occasion of the transfer, in the technology used and accounting gains associated with better use of the plant;
   iv. investments relating to any capacity increase.

(b) The following costs:
   i. the costs connected with the purchase of land or the construction or purchase of new plant of the same capacity as the plant abandoned;
   ii. any penalties imposed on the undertaking for having terminated the contract for the renting of land or buildings, if the administrative or judicial decision ordering the change of location results in the early termination of this contract.

3.1.11. Aid in the form of reductions in or exemptions from environmental taxes

122. Aid in the form of reductions in or exemptions from environmental taxes granted to undertakings in particular categories shall be compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty provided that the State aid in the form of a tax measure makes a significant improvement to environmental protection and that the tax reductions or exemptions do not undermine the general objective pursued.

123. When a Member State introduces or modifies an environmental tax scheme and grants exemptions or reductions from the relevant taxes to undertakings in particular categories, such reductions or exemptions (including a zero level) will be declared compatible for a limited duration of ten years if one of following conditions is met:

   (a) the undertaking eligible for the exemption/reduction nevertheless pays a significant proportion of the tax concerned.
      i. With regard to sectors of activity or products in respect of which no Community tax harmonisation has been carried out, the Commission considers that a significant proportion represents at least 20% of the national tax.
      ii. With regard to environmental taxes that have been harmonised at Community level, the Commission considers that a significant proportion represents the Community minimum tax level set by the applicable directive.
      iii. With regard to environmental taxes for energy uses that are mentioned explicitly as falling outside the scope of the applicable directive, the Commission considers that a significant proportion
represents either at least 20% of the national tax or the amount equal to the Community minimum tax level set by the applicable directive, whichever is lower.

(b) Except in the case of beneficiaries with demonstrably irreducible consumption or emission levels, the reductions or exemptions are conditional on the conclusion of agreements between the Member State concerned and the recipient undertakings or associations of undertakings where the undertakings or associations of undertakings undertake to achieve environmental protection objectives during the period for which the exemptions apply. Such agreements or undertakings may relate, among other things, to a reduction in energy consumption, a reduction in emissions or any other environmental measure and must satisfy the following conditions:

i. The substance of the agreements must be negotiated by each Member State and will be assessed by the Commission when the aid projects are notified to it. These agreements must notably specify the measures and the investments concerned and fix a time schedule.

ii. Member States must ensure independent and timely monitoring of the commitments concluded in these agreements.

iii. These agreements must be revised in the light of technological and other developments at least every three years and stipulate effective penalty arrangements applicable if the commitments are not met.

124. In addition to the conditions referred to above, to be compatible with Article 87 of the Treaty, reductions in/exemptions from harmonised taxes shall be authorised by the applicable legislation and comply with the limits and conditions set out therein.

3.1.12. Aid involved in tradable permit schemes

125. Tradable permit schemes may involve State aid in various ways, e.g. when permits and allowances are granted for less than their market value and this is imputable to Member States. Such State aid may be declared compatible with the common market within the meaning of Article 87(3)(c) of the EC Treaty, provided that the following conditions in particular are fulfilled:

(a) The schemes shall be set up in such a way as to achieve environmental objectives beyond those designed to be achieved on the basis of Community standards that are mandatory for the undertakings concerned.

(b) The allocation shall be carried out in a transparent way, based on objective criteria and on data sources of the highest quality available, and the total amount of tradable permits or allowances granted to each undertaking for a price below their market value shall not be higher than its expected needs.

(c) The allocation methodology shall not favour certain undertakings or certain sectors, unless this is justified by the environmental logic of the system itself.

42 These provisions may be reviewed by the Commission when the proposal for the new Directive on the EU CO2 Emission Trading System for the trading period after 2012 is adopted by the Commission
or where such rules are necessary for consistency with other environmental policies;

(d) In particular, new entrants shall in principle not receive permits or allowances on more favourable conditions than existing undertakings operating on the same markets. Granting higher allocations to existing installations compared to new entrants should not result in creating undue barriers to entry.

126. The Commission may review the conditions or criteria for compatibility of such tradable permit schemes in the light of developments in the underlying environmental policies43.

3.2. Incentive effect and necessity of aid

127. State aid must have an incentive effect, namely it must result in the recipient changing its behaviour so that the level of environmental protection is increased.

128. The Commission considers that aid does not present an incentive effect for the beneficiary in all cases in which the project has already started prior to the aid application by the beneficiary to the national authorities.

129. If the aided project has not started before the application, the incentive effect is presumed to be automatically met for all categories of aid granted to an SME.

130. For all other aided projects, the Commission will require that the incentive effect is demonstrated by the notifying Member State.

131. To demonstrate the incentive effect, the Member State concerned should provide information about what the aid beneficiaries would have done without the aid (the counterfactual scenario), and why in a counterfactual situation the more environmentally friendly alternative would not have been retained. In particular, the Member State should explain why the aid beneficiaries would not have engaged in the aided activity without receiving the aid.

132. New investments that are beneficial for the environment may have other properties which make them economically attractive to private companies beyond their environmental value. The following types of advantages not directly related to the environmental objective may be distinguished:

(a) reduced costs per unit produced, as compared to the previous equipment. This includes the consumption of materials, energy saving, increased productivity and any other cost savings. As a result, it may be possible to profitably reduce the price of the product and/or increase the revenue;

(b) innovative features improving the quality of the product. Such innovative features may allow the product to be differentiated from competing products because of its quality, and thus the price of the product may increase;

43 This may be the case, in particular, of schemes concerning CO2 emissions in the context of the review of Directive 2003/87EC.
(c) a "green image" in general may in itself have a marketing value leading to higher demand and thus to increased market shares or the possibility to raise prices;

(d) "labelling of a green production method" of a product may enable the producer to obtain a higher price for a product produced in an environmentally friendly way than for an identical product produced in a conventional manner;

(e) readiness to comply with standards expected to be adopted and become mandatory in the future, thereby avoiding future costs and possibly gaining a "first mover" advantage.

133. Member States may refer to the criteria mentioned above, as well as any other relevant criteria, to show that the aided activity does not have intrinsic benefits which would make it sufficiently attractive for the relevant undertakings without aid.

3.3. **Compatibility of aid under Article 87(3)(b) of the EC Treaty**

134. Aid to promote the execution of important projects of common European interest which are an environmental priority may be considered compatible with the common market according to Article 87(3)(b) of the EC Treaty provided that the following conditions are fulfilled.

(a) The aid proposal concerns a project which is specific and clearly defined in respect of the terms of its implementation including its participants, its objectives and effects and the means to achieve both. The Commission may also consider a group of projects as together constituting a project.

(b) The project must be in the common European interest: the project must contribute in a concrete, exemplary and identifiable manner to the Community interest in the field of environmental protection, such as by being of great importance for the environmental strategy of the European Union. The advantage achieved by the objective of the project must not be limited to the Member State or the Member States implementing it, but must extend to the Community as a whole. The project must present a substantive contribution to the Community objectives. The fact that the project is carried out by undertakings in different Member States is not sufficient.

(c) The aid is necessary and presents an incentive for the execution of the project, which must involve a high level of risk.

(d) The project is of great importance with regard to its volume: it must be substantial in size and produce substantial environmental effects.

135. In order to allow the Commission to properly assess such projects, the common European interest must be demonstrated in practical terms: for example, it must be demonstrated that the project enables significant progress to be made towards achieving specific environmental objectives of the Community.

136. The Commission will consider notified projects more favourably if they include a significant own contribution of the beneficiary to the project. It will equally consider more favourably notified projects involving undertakings from a significant number of Member States.
137. When the aid is considered to be compatible with the common market in accordance with Article 87(3)(b) of the EC Treaty, the Commission may authorise aid at higher rates than otherwise laid down in these guidelines.

4. **COMPATIBILITY OF AID SUBJECT TO A DETAILED ASSESSMENT**

4.1. **Measures subject to a detailed assessment**

138. In order to enable the Commission to carry out a more detailed assessment of any substantial amounts of aid granted under authorised schemes and to decide whether such aid is compatible with the common market, Member States should notify it in advance of any individual case of investment or operating aid granted under an authorised scheme or individually where the aid satisfies the following conditions.

(a) **For measures covered by a BER:** all cases notified to the Commission pursuant to a duty to notify aid individually as prescribed in the BER.

(b) **For individual measures covered by these guidelines:** all the following cases:

i. **Investment aid:** where the aid amount exceeds € 5 million for one undertaking (even if part of an approved aid scheme);

ii. **Operating aid for energy saving:** where the aid amount exceeds € 5 million per undertaking for five years;

iii. **Operating aid for the production of renewable electricity and/or combined production of renewable heat:** when the aid is granted to renewable electricity installations in sites where the resulting renewable electricity generation capacity exceeds 100 MW;

iv. **Operating aid for the production of biofuel:** when the aid is granted to a biofuel production installation in sites where the resulting production exceeds 100 000 t per year;

v. **Operating aid for cogeneration:** where aid is granted to cogeneration installation with the resulting cogeneration electricity capacity exceeding 200 MW. Aid for the production of heat from cogeneration will be assessed in the context of notification based on electricity capacity;

vi. **Operating aid in the form of energy tax reductions/exemptions where tax actually paid by the undertakings after reduction is below the Community minimum level or where taxes concerned are not harmonised at Community level:**

   (a) for those beneficiaries covered by harmonised energy taxes or energy taxes that are mentioned explicitly as falling outside the scope of the applicable Community directive for whom the annual consumption of the taxable base exceeds\[^{44}\]:

      i. Electricity : 2,000,000 MWh or

\[^{44}\] The Commission may review these criteria when Directive 2003/96/EC is revised.
ii. Coal and coke: 6,700,000 GJ gross calorific value or
iii. Natural gas: 6,700,000 GJ gross calorific value or
iv. Heavy fuel: 67,000 tonnes, or
v. Gas oil: 48,000,000 litres;

(b) for those beneficiaries subject to non-harmonised taxes or harmonised environmental taxes other than energy taxes for whom the aid amount exceeds € 5,000,000 for five years.

139. Member States may grant operating aid to new plants producing renewable energy that will be calculated on the basis of the external costs avoided. These measures should also be notified and will be subject to detailed assessment. The external avoided costs are the additional environmental costs that society would have to bear if the same quantity of energy were produced by a production plant operating with conventional forms of energy. They will be calculated on the basis of the difference between, on the one hand, the external costs produced and not paid by renewable energy producers and, on the other hand, the external costs produced and not paid by non-renewable energy producers. To carry out these calculations, the Member State will have to use a method of calculation that is internationally recognised and has been validated by the Commission. It will have to provide among other things a reasoned and quantified comparative cost analysis, together with an assessment of competing energy producers' external costs, so as to demonstrate that the aid does genuinely compensate for external costs avoided.

In any event, the amount of aid granted to producers that exceeds the amount of aid resulting from option 1 (cf. point 93) for operating aid for renewable sources of energy must be reinvested by the firms in renewable sources of energy.

140. The detailed assessment is a proportionate assessment, depending on the distortion potential of the case. Accordingly, the fact that a detailed assessment will be carried out does not necessarily mean that a formal investigation procedure needs to be open, although this may be the case for certain measures.

141. Provided Member States ensure full cooperation and supply adequate information in a timely manner, the Commission will use its best endeavours to conduct the investigation in a timely manner. Member States are invited to provide all the elements that they consider useful for the assessment of the case. The Member States may, in particular, rely on evaluations of past State aid schemes or measures, impact assessments made by the granting authority and other studies related to environmental protection.

4.2. Criteria for economic assessment of individual cases

142. The detailed assessment will be conducted on the basis of the positive and negative elements specified in sections 4.2.1 and 4.2.2. which will apply in addition to the criteria set out in Chapter 3. The aid intensities set out therein must in any event not be exceeded. For aid in the form of tax exemptions/reductions, the detailed assessment will be conducted on the basis of the positive and negative elements when they are relevant for this form of aid.
143. When conducting the detailed assessment of aid in the form of tax reductions/exemptions, as well as its possible counterparts, the Commission will in particular take account of evidence provided by the Member State with a view to demonstrate whether the aid beneficiary has irreducible consumption or emission levels of the taxable basis. This demonstration shall be carried out by comparing the situation of the aid beneficiary with the best performing comparable companies in the sector where the aid beneficiary operates, taking into account external audits for the beneficiary concerned.

### 4.2.1. Positive effects of the aid

144. The fact that the aid induces undertakings to pursue environmental protection which they would not otherwise have pursued constitutes the main positive element to be taken into consideration when assessing the compatibility of the aid.

#### 4.2.1.1. Existence of a market failure

145. The Commission will in general not question whether there are negative externalities related to certain types of conduct or the use of certain goods which have harmful effects on the environment, but verify whether the State aid measure has a substantial impact on environmental protection. In this context, the Commission will notably pay attention to the expected contribution of the measure to environmental protection (in quantifiable terms) and the level of environmental protection targeted, as compared to existing Community standards and/or other Member States.

146. To assess the positive effects for the environment of aid in the form of tax reductions/exemptions, the Commission will analyse the counterparts for tax reduction/exemptions, and notably take into account the following elements:

- **(a)** The details of the environmental counterparts for the tax reduction/exemption;
- **(b)** The proportion of the environmental tax that is paid by the beneficiary, even after reduction and quantified environmental benefits in terms of reduced pollution. If, after reduction, the beneficiary pays a significant proportion of the tax, it may contribute to environmental protection;
- **(c)** The quantified environmental benefits of the counterparts in terms of reduced pollution;
- **(d)** The time frame of the expected environmental benefits.

147. The Commission will also examine the considerations that may justify aid for adapting to national standards going beyond Community standards and environmental tax exemptions or reductions. The Commission will notably take into account the nature, type and location of the main competitors of the aid beneficiary, the cost of implementation of the national standard (respectively tax schemes or tradable permit schemes) for the aid beneficiary where no aid is given, and the comparative costs of these standards for the main competitors of the aid beneficiary.
4.2.1.2. Appropriate instrument

148. Whether State aid is an appropriate instrument to obtain the objective of environmental protection is an important element in the balancing test, given that other less distortive instruments may achieve the same results and since State aid may breach the PPP.

149. In its compatibility analysis, the Commission will in particular take account of any impact assessment of the proposed measure which the Member State may have made, including considerations of using policy options other than State aid, and take account of evidence that the PPP will be respected.

4.2.1.3. Incentive effect and necessity of aid

150. State aid must always have an incentive effect, that is to say it must result in the recipient changing its behaviour to increase the level of environmental protection in size or speed. Aid cannot be considered necessary solely because the level of environmental protection is increased. As set out in more detail in section 3.2., the advantages of new investments or production methods are normally not limited to their environmental effects.

151. In addition to the calculation of extra costs outlined in Chapter 3, the Commission will take account of the following elements in its analysis:

(a) **Expected change:** At least one of the following elements must be demonstrated, taking into account the normal behaviour of an undertaking in the sector concerned:
   i) *Increase in scope:* reduction of a specific type of pollution that would not be reduced without the aid;
   ii) *Increase in size:* reduction of a specific type of pollution to a further extent due to the aid;
   iii) *Increase in speed:* reduction in pollution starting at an earlier point in time due to the aid.

(b) **Production advantages:** If there are other advantages linked to the investment in terms of increased capacity, productivity, cost reductions or quality, the incentive effect is normally lower.

(c) **Advantages linked to image:** Indications that the undertaking or the relevant sector can benefit from advantages linked to a better environmental image will normally reduce the incentive effect.

(d) **Advantages linked to labelling of the production method:** If undertakings in the industry/sector concerned are able to differentiate environmentally friendly products from conventional products and thereby set higher prices for the environmentally friendly products, the incentive effect of aid is normally lower.

(e) **Possible future mandatory standards:** If there are negotiations at Community level to introduce (higher) mandatory standards which the
measure concerned would seek to target, the incentive effect of aid is normally lower.

(f) **Level of risk:** If there is a particular risk that the investment will be less productive than expected, the incentive effect of aid will normally be higher.

(g) **Level of profitability:** If the level of profitability of the action pursued is negative over the time horizon by which the investment is fully depreciated or the operating aid is intended to be in force, taking account of all the advantages and risks identified in this point, aid will normally have an incentive effect.

152. The Commission will verify that the aid beneficiary would have been affected substantially and would not have been able to bear the costs associated with the immediate implementation of national standards going beyond Community standards or in the absence of Community standards or environmental taxes.

153. To assess the incentive effect of the aid in form of tax reductions/exemptions, the Commission will analyse whether the aid concerned will induce the beneficiaries to undertake actions in favour of environmental protection, for instance in the form of agreements with the State concerned.

### 4.2.1.4. Proportionality of the aid

154. The Member State should provide evidence that the aid is necessary, that the amount is kept to the minimum and that the selection process is proportional. In its analysis the Commission will consider the following elements:

(a) **Selection process:** The selection process should be conducted in a non-discriminatory, transparent and open manner, without unnecessarily excluding companies that may compete with projects to address the same environmental objective. The selection process should lead to the selection of beneficiaries that can address the environmental objective using the least amount of aid or in the most cost-effective way.

(b) **Aid limited to the minimum:** Member States shall demonstrate that the aid intensity which is linked to the calculation of extra costs in Chapter 3 does not lead to an aid amount exceeding the expected lack of profitability when taking into account all the advantages and risks mentioned in section 4.2.1.3.

155. With respect to aid in the form of environmental tax reductions or exemptions, the Commission will verify that the criteria and conditions applied by the Member States are proportionate to the specific situation of the aid beneficiary. The Commission will consider, in particular, the following elements:

(a) Analysis of the counterparts for tax reduction/exemptions:

i. In the case of tax reduction, the aid may be considered proportional if the company actually pays a substantial part of the tax, and consequently no additional measures may be necessary in light of the distortions of competition.

ii. Identification of additional measures undertaken by companies:
− The costs of measures to be undertaken by companies to reach the objectives of the agreements should be compared with the costs of investments that otherwise would be made and taking into account benefits made in this context.
− The agreements shall specify which of the identified investments will be implemented and the corresponding time path.
− The Member State must ensure independent, strict and timely monitoring and a revision of the agreements in the light of technological and other developments at least every three years.
− The agreements must provide for effective penalty arrangements if the beneficiary does not respect their conditions.
− The Member State must ensure an evaluation of exemptions and agreements after maximum 5 years.

(b) Interaction between the Community Emission Trading System and greenhouse gas taxation, in case both apply at the same time.

(c) The total amount of tax to be paid in the absence of aid and its proportion of turnover.

4.2.2. Analysis of the distortion of competition and trade

156. In assessing the negative effects of the aid measure, the Commission will focus its analysis of the distortions of competition on the foreseeable impact the environmental aid has on competition between undertakings in the product markets affected.  

157. If the aid is proportional, notably if the calculation of the extra investment or operating costs has taken into account all advantages to the undertaking, the negative impact of the aid is likely to be limited. However, a profit-seeking undertaking will normally only increase the level of environmental protection beyond mandatory requirements if it considers that this will result at least marginally in some sort of advantage for the undertaking.

158. The negative effects of the aid in form of tax reductions/exemptions will result from the reduced costs incurred by the beneficiaries, due to lower taxation levels. If the costs of the counterparts to the tax reduction/exemption are very high, these cost advantages may be considered limited. However, even in that case, the aid may have a negative impact, for instance in keeping an inefficient firm afloat, as it can be expected from an efficient firm that it would be able to adjust its production methods to the environmental requirements underlying the tax. In addition, the aid may have negative effects on indirectly affected product markets that are complementary to the directly affected market where the aid is impacting in the first place, as it may reduce the production costs of the beneficiary and/or prevent entry from new competitors.

45 A number of markets may be affected by the aid, because the impact of the aid may not be restricted to the market corresponding to the activity that is supported but may extend to other markets, which are connected to it either because they are upstream, downstream or complementary, or where the beneficiary is already present or may be present in the near future.
4.2.2.1. Dynamic incentives/crowding out

159. State aid for environmental protection may have as the result that aid beneficiaries refrain from investing in environmentally friendly technologies beyond regulatory standards and simply wait for the State to intervene.

160. In its analysis, the Commission will consider the following elements:

(a) **Amount of aid:** The higher the amount of aid, the more likely it is that part of the aid can be used to distort competition. This is in particular the case if the aid amount is high compared to the size of the general activity of the beneficiary.

(b) **Frequency of aid:** If an undertaking receives aid repeatedly, it is more likely that this will distort dynamic incentives.

(c) **Duration of the aid:** If operating aid is granted for a long period, this is more likely to distort competition.

(d) **Gradual decrease of aid:** If operating aid is reduced over time, the undertaking will have an incentive to improve efficiency and the distortion of dynamic incentives will therefore be reduced over time.

(e) **Readiness to meet future standards:** If the aid will enable the undertaking concerned to meet new Community standards expected to be adopted in the foreseeable future, the aided investment will reduce the costs of investments that the undertaking would have had to make in any event.

(f) **Level of the regulatory standards and/or taxation in relation to the environmental objectives:** The lower the level of mandatory requirements, the higher the risk that aid to go beyond mandatory requirements is not necessary and will crowd out investments or be used in a way that distorts dynamic incentives.

(g) **Risk of cross-subsidisation:** Where the undertaking produces a wide range of products or produces the same product using a conventional and an environmentally friendly process, the risk of cross-subsidisation is higher.

(h) **Technological neutrality:** Where a measure focuses on one technology only, the risk of distorting dynamic incentives is higher.

4.2.2.2. Maintaining inefficient firms afloat

161. State aid for environmental protection may be justified as a transitional mechanism to move towards a full allocation of environmentally negative externalities. It should not be used to grant unnecessary support to undertakings which are unable to adapt to more environmentally friendly standards and technologies because of their low levels of efficiency.

162. In its analysis, the Commission will consider the following elements:
(a) Nature and type of beneficiaries: Where the beneficiary has a relatively low level of productivity and is in poor financial health, it is more likely that the aid will contribute to artificially maintaining the undertaking in the market.

(b) Overcapacity in the sector targeted by the aid: In sectors where there is overcapacity, investment aid is liable to sustain the overcapacity and maintain inefficient market structures.

(c) Normal behaviour in the sector targeted by the aid: If other undertakings in the sector have reached the same level of environmental protection without aid, it is more likely that the aid will serve to maintain inefficient firms in the market.

(d) Level of mandatory standards: If there are no standards or if the mandatory standards are relatively low compared to the existing level of environmental protection, there is a higher risk that the aid will generate or maintain inefficiencies.

(e) Duration of the aid: The longer the duration of the aid, the higher the risk that the aid will serve to maintain inefficient undertakings in the market.

(f) Investment costs or aid amount in form of tax reduction/exemption in proportion of the beneficiary's turnover: the higher the cost, or the aid amount, compared to the activity of the beneficiary, the more likely that the aid will lead to inefficiencies.

4.2.2.3. Market power/exclusionary behaviour

163. The Commission will assess the market power of the beneficiary concerned before the aid is granted, and the change in market power which can be expected as a result of the aid. Aid for environmental protection given to a beneficiary with substantial market power may be used by this beneficiary to strengthen or maintain its market power, by further differentiating its products or excluding rivals. The Commission is unlikely to identify competition concerns related to market power in markets where each aid beneficiary has a market share below 25% and in markets whose Herfindahl-Hirschman Index (HHI) of market concentration is below 2000.

164. In its analysis, the Commission will consider the following elements:

(a) Market power of aid beneficiary and market structure: Where the recipient is already dominant on the affected market, the aid measure may reinforce this dominance by further weakening the competitive constraint that competitors can exert on the recipient undertaking.

(b) New entry: Where the aid concerns product markets or technologies that compete with products where the aid recipient is an incumbent and has market

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46 A number of markets may be affected by the aid, because the impact of the aid may not be restricted to the market corresponding to the activity that is supported but may extend to other markets, which are connected to it either because they are upstream, downstream or complementary, or where the beneficiary is already present or may be present in the near future.
power, the aid may be used strategically to prevent new entry or substitution towards more environmentally friendly products offered by competitors.

(c) **Product differentiation and price discrimination**: The aid may have the negative effect of facilitating product differentiation and price discrimination by the aid recipient, to the detriment of consumers.

(d) **Buyer power**: The market power of an undertaking may be limited by the market position of the buyers. The presence of strong buyers can serve to counter a finding of market power if it is likely that the buyers will seek to preserve sufficient competition in the market.

(e) **Selection process**: Aid measures which allow undertakings with market power to influence the selection process, such as by having the right to recommend undertakings in the selection process or influencing the environmental project in a way which disfavours alternative projects on unjustified grounds, are liable to raise the Commission's concern.

(f) **Conditions of competition in the affected markets and importance of price competition between the various competitors**: the more competition is based on price, the greater the risk that it is affected by aid in form of tax reduction/exemptions. If by contrast, products are highly differentiated and competition is not primarily based on price, the impact of the aid in form of tax reduction/exemption is likely to be less important.

### 4.2.2.4. Effects on trade and location

165. State aid for environmental protection may result in some territories benefiting from more favourable production conditions, notably due to comparatively lower production costs as a result of the aid, or due to higher production standards achieved through the aid. This may result in companies re-locating to the aided territories, or to displacement of trade flows towards the aided area.

### 4.2.3. Balancing and decision

166. In the light of these positive and negative elements, the Commission will balance the effects of the measure and determine whether the resulting distortions adversely affect trading conditions to an extent contrary to the common interest.

167. The Commission may raise no objections to the notified aid measure without initiating the formal investigation procedure or, following the formal investigation procedure laid down in Article 6 of Regulation (EC) No 659/1999\(^\text{47}\), decide to close the procedure with a decision according to Article 7 of the Regulation. Where it takes a conditional decision within the meaning of Article 7(4) of that Regulation, it may for instance consider attaching the following conditions, which must reduce the resulting distortions or effect on trade and be proportionate:

(a) Lower aid intensities than the maximum intensities allowed in Chapter 3 or lower levels of tax reductions;

(b) Separation of accounts in order to avoid cross-subsidisation from one market to another market, when the beneficiary is active in multiple markets;

(c) Additional requirements to be met to improve the environmental effect of the agreements concluded as a counterpart for the tax reduction;

(d) No discrimination against other potential beneficiaries (reduced selectivity).

5. **Cumulation**

168. The aid ceilings fixed under these guidelines shall apply regardless of whether the support for the aided project is financed entirely from State resources or is partly financed by the Community.

169. Aid authorised under these guidelines may not be combined with other State aid within the meaning of Article 87(1) of the Treaty or with other forms of Community financing if such overlapping produces an aid intensity higher than that laid down in these guidelines. However, where the expenditure eligible for aid for environmental protection is eligible in whole or in part for aid for other purposes, the common portion will be subject to the most favourable aid ceiling under the applicable rules.

170. Aid for environmental protection shall not be cumulated with *de minimis* aid in respect of the same eligible costs if such cumulation would result in an aid intensity exceeding that fixed in these guidelines.

6. **Final provisions**

6.1. **Reporting and monitoring**

6.1.1. **Annual reports**

171. In line with the requirements of Regulation (EC) No 659/1999 and Regulation (EC) No 794/2004, Member States must submit annual reports to the Commission.

172. Beyond the requirements stipulated in those provisions, annual reports for environmental aid measures shall contain, for each approved scheme, the following information as regards large undertakings:

– the names of the beneficiaries;
– the aid amount per beneficiary;

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– the aid intensity;
– the description of the objective of the measure, and of what type of environmental protection it is intended to promote;
– the sectors of activity where the aided projects are undertaken;
– an explanation of how the incentive effect has been respected, notably using the indicators and criteria mentioned in Chapter 4 above.

173. In case of tax exemptions or reductions, the Member State must only provide the legislative and/or regulatory text(s) establishing the aid, detail the categories of undertakings benefiting from tax reductions or exemptions and the sectors of the economy most affected by these tax exemptions/reductions, and explain how the incentive effect has been respected for large undertakings.

174. The annual reports will be published on the internet site of the Commission.

6.1.2. Access to full text of schemes

175. The Commission considers that further measures are necessary to improve the transparency of State aid in the Community. In particular, it is necessary to ensure that the Member States, economic operators, interested parties and the Commission itself have easy access to the full text of all applicable environmental aid schemes.

176. This can easily be achieved through the establishment of linked internet sites. For this reason, when examining environmental aid schemes, the Commission will systematically require the Member State concerned to publish the full text of all final aid schemes on the internet and to communicate the internet address of the publication to the Commission. The scheme must not be applied before the information is published on the internet.

177. Member States must ensure that detailed records regarding the granting of aid for all environmental measures are maintained. Such records, which must contain all information necessary to establish that the eligible costs and maximum allowable aid intensity have been observed, must be maintained for 10 years from the date on which the aid was granted and be provided to the Commission upon request.

The Commission will ask Member States to provide this information in order to carry out an evaluation of these guidelines four years after their entry into force.50

6.2. Appropriate measures

178. The Commission herewith proposes to Member States, on the basis of Article 88(1) of the EC Treaty, the following appropriate measures concerning their respective existing environmental aid schemes:

In order to comply with the provisions of these guidelines, Member States should amend, where necessary, such schemes in order to bring them into line

50 In that process, Member States may want to assist the Commission by providing their own ex post assessment of schemes and individual measures.
with these guidelines within twelve months after their entry into force, with the following exceptions:

i. the new threshold for large individual projects will apply as from the entry into force of these guidelines;

ii. the duty to provide more detailed annual reports will apply to aid granted under existing aid schemes once six months have elapsed after the entry into force of these guidelines.

179. The Member States are invited to give their explicit unconditional agreement to these proposed appropriate measures within two months from the date of publication of these guidelines in the Official Journal. In the absence of any reply, the Commission will assume that the Member State in question does not agree with the proposed measures.

6.3. Entry into force, validity and revision

180. These guidelines will enter into force on 1 January 2008 or, if they have not been published in the **Official Journal of the European Union** before that date, on the first day following their publication therein and will replace the Community guidelines on State aid for environmental protection of 3 February 2001 (2001/C 37/03).

181. These guidelines will be applicable until 31 December 2014. After consulting the Member States, the Commission may amend them before that date on the basis of important competition policy or environmental policy considerations or in order to take account of other Community policies or international commitments. Such amendments might in particular be necessary in the light of future international agreements in the area of climate change, and the future of the European climate change legislation. Four years after the date of their publication, the Commission will undertake an evaluation of these guidelines based on factual information and the results of wide consultations conducted by the Commission on the basis, notably, of data provided by the Member States. The results of the evaluation will be made available to the European Parliament, the Committee of the Regions and the European Economic and Social Committee and to the Member States.

182. The Commission will apply these guidelines to all aid projects notified in respect of which it is called upon to take a decision after the guidelines are published in the **Official Journal**, even where the projects were notified prior to their publication. This includes individual aid granted under approved aid schemes and notified to the Commission pursuant to an obligation to notify such aid individually.

183. In line with the Commission notice on the determination of the applicable rules for the assessment of unlawful State aid \(^51\), the Commission will apply in the case of non-notified aid:

(a) these guidelines if the aid was granted after their entry into force;

(b) the guidelines in force when the aid was granted in all other cases.

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### Table illustrating the aid intensities for investment aid as a part of eligible costs:

<table>
<thead>
<tr>
<th>Aid for improving on Community standards or on environmental protection in the absence of Community standards</th>
<th>Small enterprise</th>
<th>Medium-sized enterprise</th>
<th>Large enterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td>70%</td>
<td>60%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>80% if eco-innovation</td>
<td>70% if eco-innovation</td>
<td>60% if eco-innovation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aid for early adaptation to future Community standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>- more than 3 years</td>
</tr>
<tr>
<td>- between 1 and 3 years before the mandatory date of transposition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aid for waste management</th>
</tr>
</thead>
<tbody>
<tr>
<td>70%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aid for renewable energies</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
</tr>
<tr>
<td>70% for biomass</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Aid for energy saving</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Aid for cogeneration installations</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Aid for District heating using conventional energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>70%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Aid the remediation of contaminated sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
</tr>
<tr>
<td><strong>Aid for relocation of undertakings</strong></td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
</tbody>
</table>