

National Allocation Plan for Austria pursuant to Sec. 11 of the Austrian Emission Allowances Trading Act (EZG) for the period 2008-2012

In accordance with Art. 9 of Directive 2003/87/EC and
the Decision of the European Commission from 2 April
2007

29 June 2007

Courtesy translation



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About the process of drawing up a national allocation plan

In 2006, the Federal Environment Agency (UBA) and the Institute of Industrial Ecology (IIÖ) were instructed by the Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW), the Austrian Federal Economic Chamber (WKÖ) and the Austrian Association of Electricity Suppliers (VEÖ) to conduct a baseline study on the historical CO₂ emission situation of the installations included in the emissions trading scheme.

The Austrian Institute of Economic Research (WIFO) and the consultancy agency KWI analysed the development of CO₂ emissions of the various sub-sectors over the 2008-2012 period. The results of these studies served as an essential basis for the assessment of allocated allowances at the industrial sector, sub-sector and installation level.

The process of implementing the Emissions Trading Directive was facilitated by joint working groups of the BMLFUW, the Federal Ministry of Finance (BMF), the Austrian Federal Economic Chamber (WKÖ), the Federation of Austrian Industry (IV) and the Association of Austrian Electricity Suppliers (VEÖ).

The status quo of the National Allocation Plan

The present document represents the final National Allocation Plan of Austria for the period 2008-2012, which was taken into consideration by the European Commission in accordance with Article 9 of the Emissions Trading Directive 2003/87/EC of the European Parliament and the Council, and approved by Decision of the Commission from 2 April 2007 under condition of certain changes to be made.

The first draft of the plan was made available to the installation owners and the ministries concerned beginning early August 2006, in accordance with Sec. 11 (9) of the Austrian Emission Allowance Trading Act (EZG)¹. The installation owners were given a six-week period to make a statement on the allocation plan and the preliminary quantity of allowances allocated to their installations.

The second draft of the plan was made available to the general public on 17 October 2006, in accordance with Sec. 11 (10) of the Austrian Emission Allowance Trading Act (EZG)². Members of the public were given an opportunity to make a statement on the allocation plan within six weeks. Statements made during the second consultation period have been published on the website www.eu-emissionshandel.at.

In the present final document, statements made by the installation owners and the general public as well as amendments in accordance with the Commission's Decision from 2 April 2007 have been taken into account. All data, facts and information on decisions given here were available on or before 27 June 2007.

Moreover, the structure of the National Allocation Plan for Austria conforms to the requirements of the European Commission, as standardised in two Guidance Papers.

¹ as amended by Federal Law Gazette I No. 171/2006, entered into force on 29 December 2006 (prior to taking effect: Sec. 13 (1) EZG)

² as amended by Federal Law Gazette I No. 171/2006, entered into force on 29 December 2006 (prior to taking effect: Sec. 13 (2) EZG)

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Summary

Basic principles of the allocation plan	
Total quantity	<p>The total quantity of allowances is the sum of all allowances for the industry sector and the energy sector, totalling 30.73 million p.a. This equates to a reduction by approximately 2.62 million allowances p.a. compared to the first allocation period 2005-2007³, or roughly 5.4 million t CO₂ compared to the forecast emission values 2008-2012 ("business as usual").</p> <p>A reserve of 1% of the total quantity (307,294 allowances x 5) for new entrants will be retained initially. 98.7% of the total quantity is issued free of charge or taken from the reserve (equating to 30.33 million p.a.). 400,000 allowances p.a. (or 2 million allowances over the whole period) will be auctioned.</p> <p>Total quantity = emission forecast – (Σ Climate protection contribution_{sector 08-12})</p>
JI/CDM proportion	<p>Within the scope of the so called "Linking Directive", the installation operators implicated by the allocation plan 2008-2012 are permitted to offset their emissions to a limited extent with emission reduction units from JI or CDM projects. Per installation, the proportion of emission reduction units used in this way may not exceed a value of 10% of the quantity of allowances allocated in accordance with this allocation plan.</p>
Allocation at sector level	<p>On the basis of the reduction potentials of the individual sectors for the attainment of the Kyoto targets in accordance with the adaptation of the Austrian climate strategy 2007, a total volume of 11.16 million and 19.57 million allowances p.a. are earmarked for energy industry (electricity, district heating and mineral oil sectors) and manufacturing industry/ind. processes (integrated steelworks and other industries) respectively (each number includes the reserve and auction quota).</p> <p>Using trend analysis, the WIFO/KWI calculated <i>business-as-usual</i> values (BAU) of emissions for each sub-sector of an industry sector in the period 2008-2012 on the basis of the historical base data of the UBA/IIÖ survey.</p> <p>The number of allowances allocated to a sector is calculated by taking the sum of <i>business-as-usual</i> values of all sub-sectors within a sector and subtracting the climate protection contribution of the sector.</p> <p>Total no. of allowances_{sector (08-12)} = (Σ BAU_{sub-sectors} – climate protection contribution_{sector})</p> <p>The total number of allowances is multiplied by a reserve factor (to ensure the reserve quota of 1%). In addition, the auctioned share is subtracted.</p> <p>Free allocation_{sector} = total no. of allowances_{sectors} * reserve factor – auction share_{sector}</p>
Allocation at sub-sector level	<p>Allowances were allocated at sub-sector level on the basis of historical emission data and the <i>business-as-usual</i> trend analyses (GF_{sector}) of CO₂ emissions, taking into account a potential factor (PF_{sector}), which reflects the potential of the sub-sector to reduce its CO₂ emissions. The compliance factor (CF_{sector}) harmonises the number of allowances allocated at sub-sector level with the number of allowances available to the sector and is the same for all sub-sectors of any one sector.</p> <p>Allocation₍₀₈₋₁₂₎ to sub-sector = Allocation base_{sector} * GF_{sector} * PF_{sector} * CF_{sector}</p>
Allocation at installation level	<p>Allowances were allocated at installation level using the same method for all installations.</p> <p>Allocation₍₀₈₋₁₂₎ to installation = Allocation base_{installation} * $PF_{\text{installation}}$ * $CF_{\text{installation}}$</p> <p>The allocation base of an installation is equivalent to its average emissions in the 2008-2012 period. If these figures are not representative, a different allocation basis is used.</p> <p>The potential factor ($PF_{\text{installation}}$) takes into account process emissions, the CO₂ intensity of the fuel used, the use of CHP and the extraction of waste heat for district heating, as well as Best Available Techniques (BAT). The compliance factor (CF_A) harmonises the number of allowances allocated at installation level with the number of allowances available to the sub-sector and is identical for all installations within any one sub-sector.</p>

³ The allocated quantity for the 2005-2007 period (NAP-1) is 33 million certificates p.a. (incl. reserve quota). Under NAP-2 (2008-2012), additional installations have been included in the scope of the emissions certificate trading scheme, which exhibit a total emission volume of approx. 350,000 t CO₂ p.a. Assuming that the scope would be identical, this results in a reduction by approx. 2.62 million certificates from NAP-1 to NAP-2.

New entrants	<p>The Emission Allowance Trading Act (EZG) provides for a reserve for new entrants amounting to at least 1% of the total amount of allowances. For the second allocation period (2008-2012), the reserve quota is set at 1% of the total quantity, i.e. 307,294 allowances p.a. or 1.54 million allowances for the whole allocation period. The reserve is raised by subtracting 1% of the total quantity before allocation to sub-sectors and installations. The reserve is distributed on a "first come - first serve" basis. If the reserve is not used up wholly by the end of the period, the remaining allowances may be auctioned off.</p> <p>If the reserve proves insufficient for allocation to new installations, emission allowances are being purchased on the market by an appropriate authority on the basis of a statutory provision in the Emission Allowance Trading Act, entered into force on 29 Dec. 2006 (Fed. Law Gazette I No. 171/2006), and made available to the installation operators free of charge.</p>
Early action; clean technologies	Early action and clean technologies are considered via the potential factor for emission reduction.

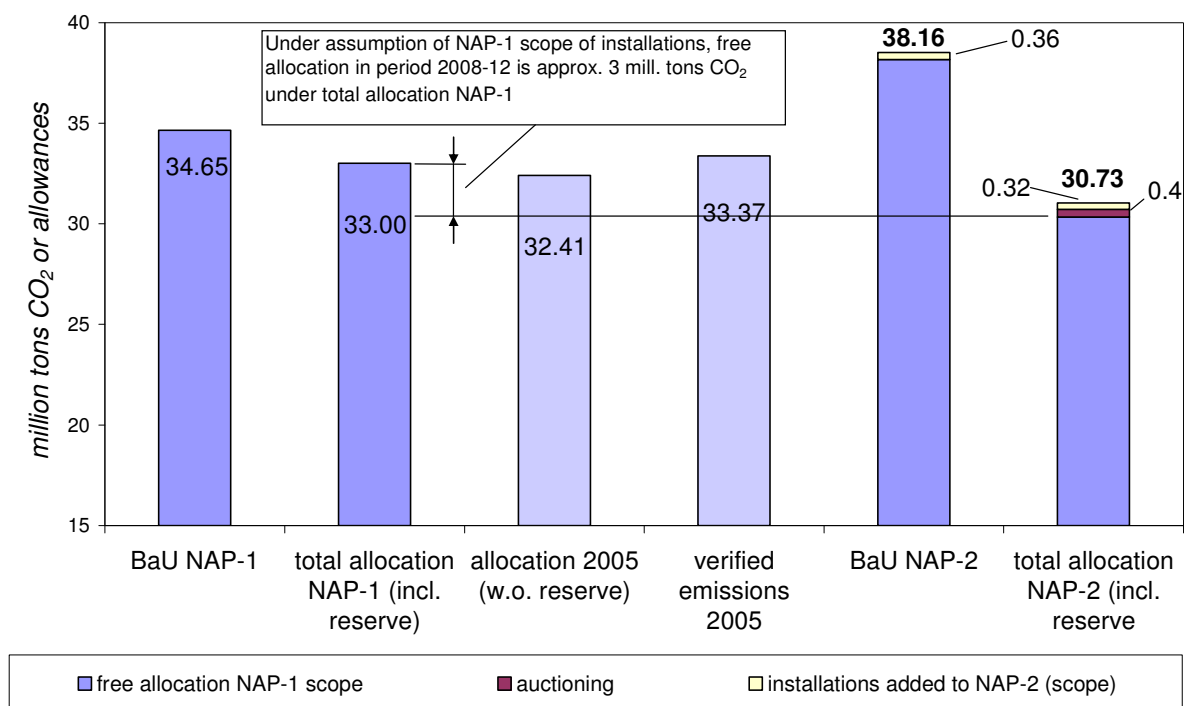


Figure 1: Overview of the total quantity of allowances allocated under NAP-1 and NAP-2

Materials

The National Allocation Plan was drawn up based on the following documents:

- Federal Environment Agency 2006: KYOTO PROGRESS REPORT FOR AUSTRIA 1990–2004 (data as of 2006) (www.umweltbundesamt.at)
- Federal Environment Agency 2006: Evaluation Report on the Implementation of the Climate Strategy in Austria, final report (www.umweltbundesamt.at)
- Federal Environment Agency 2006: Austria's Projection of Greenhouse Gases 2003-2020, final report
- BMLFUW 2005: Evaluation of Federal Environmental Support from 01/01/2002 – 31/12/2004 (www.kommunalkredit.at)
- Federal Environment Agency / IIÖ 2006: CO₂ Emissions of Installations and Sub-sectors as a Basis for Emission Allowance Trading (data as of 15/05/2006; amendments August 2006)
- KWI / WIFO 2006: EU-ETS as a Basis for Decision on the Second Allocation Plan (NAP-2) (preliminary final report July 2006)
- BMLFUW 2007: Amendment of Austria's Climate Strategy to reach the Kyoto Target 2008-2012 (www.klimastrategie.at)

The following additional documents were used:

- European Commission: *Guidance Paper to assist Member States in the implementation of the criteria listed in Annex III of the Directive* (www.eu-emissionshandel.at)
- DIRECTIVE 2003/87/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community (www.eu-emissionshandel.at)
- Federal Law Gazette I No. 46 of 30 April 2004: Federal Law on a scheme for trading greenhouse gas emission allowances (Emission Allowance Trading Act – EZG) (ris1.bka.gv.at/authentic/findbgbl.aspx?name=entwurf&format=pdf&docid=COO_2026_100_2_62627)
- Federal Law Gazette I No. 135 of 9 December 2004: Amendment to the Emission Allowance Trading Act (ris1.bka.gv.at/authentic/findbgbl.aspx?name=entwurf&format=pdf&docid=COO_2026_100_2_117151)
- Federal Law Gazette I No. 34 of 16 March 2006: Law Adapting the Laws on Environmental Protection ("Umweltrechtsanpassungsgesetz") 2005 (amendment to the Emission Allowance Trading Act) (ris1.bka.gv.at/authentic/findbgbl.aspx?name=entwurf&format=pdf&docid=COO_2026_100_2_233419)
- Federal Law Gazette I No. 171 of 28 December 2006: Amendment to the Emission Allowance Trading Act (passed in the session of the National Council on 15 December 2006)

The Federal Law Gazettes and information on drafts can also be found at www.eu-emissionshandel.at.

Introduction

Directive 2003/87/EC of the European Parliament and the Council establishing a scheme for greenhouse gas emission allowance trading in the Community and amending Directive 96/61/EC of the Council was announced in the Official Journal of the European Community on 25 October 2003.

Every installation within the scope of the Directive must have a licence for the emission of greenhouse gases and is allocated a number of emission allowances. In 2005-2007, this allocation was governed by the first National Allocation Plan. The present second allocation plan lays down the rules for allocation of emission allowances during the 2008-2012 trading period.

Article 9 of Directive 2003/87/EC requires that every Member State publishes and submits to the European Commission its National Allocation Plan no later than 18 months before the start of a trading period. The plan must state the overall quantity of emission allowances that the Member State intends to allocate, and how these allowances will be allocated to the participants.

The plan must be based on objective and transparent criteria, which shall include the criteria listed in Annex III of the Directive. The European Commission presented a Guidance Paper on how to apply the criteria listed in Annex III in January 2004. On 22 December 2005, another document was published containing further guidance by the Commission on establishing an allocation plan. The Austrian allocation plan takes into account the directions given in these Guidance Papers and adheres to the proposed structure.

After submission of the complete allocation plan to the European Commission, the latter decided on the allocation plan within three months, following Article 9 (3) of the Directive. The final plan takes into account the changes entailed in the Decision of the Commission from 2 April 2007.

Based on the approved allocation plan, an ordinance on allocation will be enacted, and legally binding official notifications on the allocation of emission allowances will be submitted to installation operators.

Consideration of the Commission's guidance

In January 2004, the European Commission issued its guidance on how to apply the criteria listed in Annex III. On 22 December 2005, a further document was published containing new guidance by the Commission on preparing the allocation plan. Both documents can be obtained at www.eu-emissionshandel.at.

Common format of allocation plans

The *Guidance Paper* of 7 January 2004 sets out a common format for the preparation of allocation plans. The Austrian allocation plan adheres to the proposed structure (see also sections 1 through 8 below). The issues presented in the *Guidance Paper* are listed before the various sections.

Information on allocation at sector and installation level

The document of 22 December 2005 contains various recommendations by the Commission for the allocation at activity level (in Austria: sector and sub-sector level) and at installation level:

- The Commission points to the possibility of auctioning a share of up to 10% of the allowances in accordance with Article 10 of the Directive. It is emphasised that the use of this possibility would allow the governments and the Commission to gather experience with this policy instrument, thereby backing up strategic considerations with practical experience.

In accordance with this recommendation, the Austrian allocation plan provides for approx. 1.3% of the total quantity of emission allowances to be auctioned; the revenues thus generated are to be used for the purpose of climate protection.

- The Commission is interested in experiences with allocations to installations using benchmarks and considers an allocation scheme using benchmarks expedient for specific sectors – the electricity sector is explicitly named.

The Austrian allocation plan complies with this recommendation and has implemented an allocation scheme using benchmarks for the electricity sector.

- It is noted that the Directive requires the involvement of the general public in the preparation process of the National Allocation Plan and the Member States are requested to set suitable deadlines for the involvement of stakeholders and the general public.

Section 11 (9) and (10)⁴ of the Austrian Emission Allowance Trading Act sets out deadlines of twice six weeks to give the installation operators concerned and the general public an opportunity to give their opinions.

- It is recommended not to base the allocations in the second trading period on the emission data of the first period, because this would put installations that have actively reduced their emissions over the first trading period at a disadvantage, giving them fewer allowances than installations exhibiting no emission reduction in the first period.

The Austrian allocation plan is based on the historical emissions of a base period, which includes 2005 (2002 to 2005). This will ensure that the most up-to-date data available is used for allocation assessment and that, for example, recent changes to the installation can be taken into account.

⁴ as amended by Fed. Law Gazette I No. 171/2006, entered into force on 29 Dec. 2006 (prior to taking effect: Sec. 13 (1) and (2) EZG)

- The Commission recommends to reduce the complexity of allocation rules, and therefore the administrative effort. In connection with this, it is recommended no longer to distinguish between energy and process emissions.

The Austrian allocation plan for the 2008-2012 period will continue to give special consideration to process emissions. This is still thought to be worthwhile, because process emissions have a much lower technical potential for emission reduction than fuel emissions. Furthermore, sectors with a high proportion of process emissions (e.g. the minerals industry) that need to buy additional allowances are affected economically to a significantly greater extent than sectors without process emissions (e.g. with regard to the price of a allowance in relation to the specific product price).

Definition of combustion installations

Due to the fact that the various Member States had different interpretations of the definition of the term "combustion installation" during the first trading period, it is the opinion of the Commission that a uniform definition should be put in place for the second trading period.

"A consistent interpretation and coverage of combustion installations across Member States in the second trading period is vital in order to avoid significant distortions of competition throughout the Internal Market."

The Austrian allocation plan adheres to the recommendations of the Commission on the definition of combustion installations.

1 Determination of total quantity of allowances

1.1 What is the Member State's emission limitation or reduction obligation under Decision 2002/358/EC or under the Kyoto Protocol?

In accordance with Council Decision 2002/358/EC concerning the approval, on behalf of the European Community, of the Kyoto Protocol and the joint fulfilment of commitments thereunder, Austria undertakes to achieve a reduction by 13% of the emissions of the greenhouse gases carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆) in the 2008-2012 period compared to 1990.

According to the latest greenhouse gas emissions inventory of the Federal Environment Agency, Austria emitted 78.96 million tons CO₂-equivalents in the Kyoto base year 1990. This value covers all greenhouse gases within the scope of the Kyoto Protocol. For Austria, the 13% reduction of greenhouse gases in the Kyoto commitment period 2008-2012 translates into a target value of about 68.69 million tons CO₂-equivalents. Compared to the 1990 figures, this is a reduction by 10.27 million tons CO₂-equivalent.

In absolute figures, the emissions in 2004 exceed those of the base year by 12.4 million tons, and the Kyoto target is exceeded by 22.6 million tons. When applying the JI/CDM programme, which is set to make a contribution of about 9 million tons per year and under which the Austrian Government buys emission reduction units from JI and CDM projects, the emissions in 2004 were approximately 14 million tons above the Kyoto target.

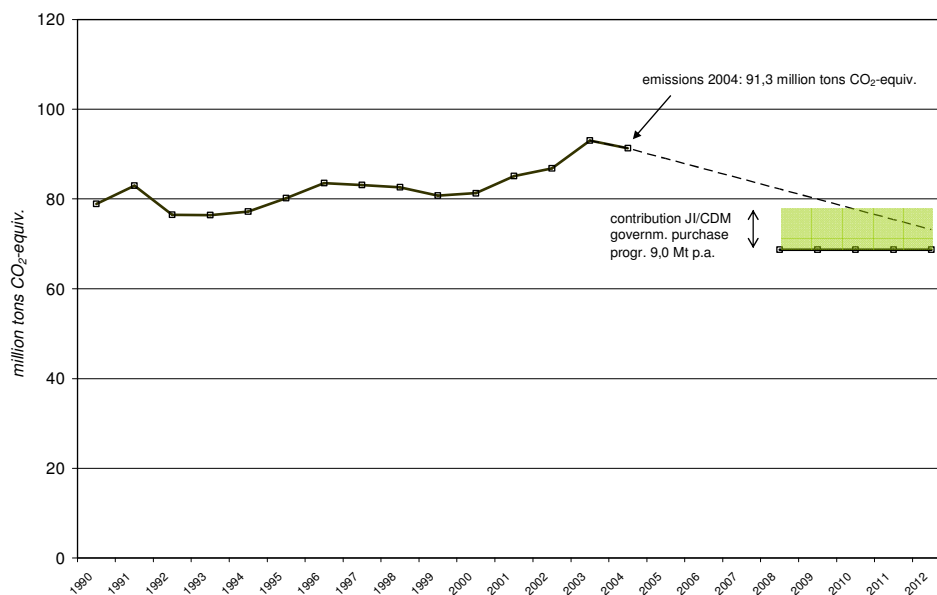


Figure 2: Evolution of greenhouse gas emissions from 1990 to 2004 and reduction target. Source: Kyoto Progress Report for Austria 1990 – 2004 (data as of 2006), UBA 2006

Under the reporting requirement of the greenhouse gas monitoring decision of the Council, the Federal Environment Agency (www.umweltbundesamt.at) prepared an emission forecast on the basis of the latest WIFO energy scenarios covering all measures required by statutory law or ordered by the authorities from 01/01/1995 to 25/01/2005 in the scenario "with measures" (UBA, 2006).

The extent of the required reduction of emissions is calculated on the basis of the emission forecast for 2010, the planned contribution of the Austrian JI/CDM programme and the Kyoto target value. Until 2010, an emission value of approximately 90 million t CO₂-equivalents is anticipated with all

existing measures (2002 Climate Strategy) taken into account. The purchase of JI/CDM certificates allows for an additional 9 million emission reduction units p.a. (that is 45 million certificates over the whole period 2008-2012). This necessitates a further reduction by approx. 14 million t CO₂-equivalents p.a. to reach the Kyoto target value of 68.69 million tons on average over the 2008-2012 period.

The amendment of the Climate Strategy 2007 serves to raise these additional reduction requirements (see explanations to question 1.4).

1.2 What principles, assumptions and data have been applied to determine the contribution of the installations covered by the emissions trading Directive to the Member State's emission limitation or reduction obligation (total and sectoral historical emissions, total and sectoral forecast emissions, least-cost approach)? If forecast emissions were used, please describe the methodology and assumptions used to develop the forecasts.

Determining the installations' share covered by the emissions trading scheme

The contribution towards limiting or reducing emissions of the installations within the scope of the Emissions Trading Directive was determined using the following method:

1. The Climate Strategy of the Austrian Federal Government sets out the reduction contributions for energy industries and manufacturing industry/industrial processes in absolute terms vis-à-vis the trend.
2. For the installations within the scope of the Directive, trend analyses were drawn up at activity level (WIFO/KWI), delivering a forecast for the activities analysed, under the assumption of a *business as usual* scenario. The sum of all *business as usual* values is the trend value.

The total quantity is derived as follows:

$$\text{Total quantity} = \sum_{\text{activities}} \text{Trend value}_{\text{activity}} - \sum_{\text{sectors}} \text{Climate protection contribution 08-12}_{\text{sector}}$$

Since the WIFO/KWI method used for calculating the trend values of activities within the emission trading scheme relevant to the allocation plan 2008-2012 differs from that of the emission forecast of the scenario "with measures" (UBA 2006), the respective results for the emission trading sector are not directly comparable.

The Federal Environment Agency survey of the emissions in the base period 2002 to 2005

The CO₂ emissions of the installations within the scope of the Directive from 2002 to 2005 were surveyed by the Federal Environment Agency and the results checked for plausibility on the basis of the legal provisions of the Emission Allowance Trading Act.

On the basis of the collected data, the installations were roughly classified by *Distance to Best Practice*. Where possible, the CO₂ intensity and the efficiency of energy conversion were also calculated.

The final report of the survey will be available at www.umweltbundesamt.at once published. The results at activity level are available in section 8.2 on page 37.

The result of the data survey are consistent with the base data for the trend calculations at activity level by WIFO/KWI.

The WIFO/KWI trend analyses

Since the start of 2006, the WIFO and consultancy KWI have been carrying out studies on the future evolution of production and resulting CO₂ emissions of the affected sub-sectors in the second trading period 2008-2012. These sub-sector studies were commissioned by the Federal Ministry of Agriculture, Forestry, Environment and Water Management in collaboration with the Federal Ministry of Economics and Labour (BMWA) and a number of industrial stakeholders (IV, VEÖ, WKO).

These sub-sectors cover 100 % of the emissions of all activities and installations within the scope of the Emissions Trading Directive. For information on the methods used for the trend calculations, please see the Annex "Trend calculations by WIFO/KWI".

The sum of all emission values of the so-called *business as usual* scenarios is the basis for the assessment of the total quantity of allowances, from which the sectors' reduction contributions are deducted.

- 1.3 What is the total quantity of allowances to be allocated (for free and by auctioning) and what is the proportion of overall emissions that these allowances represent in comparison with emissions from sources not covered by the emissions trading Directive? Does this proportion deviate from the current proportion of emissions from covered installations? If so, please give reasons for this deviation with reference to one or more criteria in Annex III to the Directive and/or to one or more other objective and transparent criteria.

The total quantity of emission allowances in the National Allocation Plan is determined as described under item 1.2. All in all, 30.73 million allowances are allocated each year.

The CO₂ emissions from installations covered by the allocation plan are depicted in tables 1 and 2 as a proportion of total CO₂ emissions. Between 1998 and 2004, the proportion of CO₂ emissions ranged from 42.3% to 45.8%.

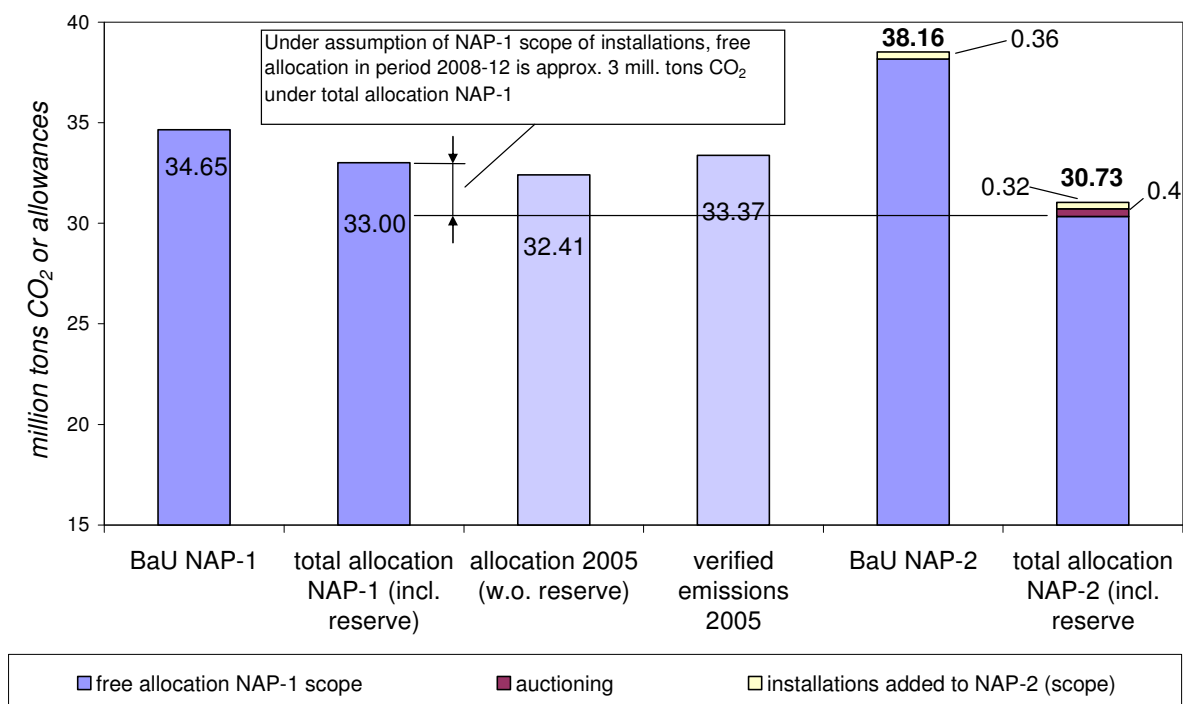


Figure 3: Comparison of business as usual forecasts and allocations of the first trading period (2005-2007) with those of the second trading period (2008-2012)

Table 1: Part of overall emissions under NAP-1 (2005-2007) generated by installations under the emissions trading scheme

	1998	1999	2000	2001	2005	2006	2007
UBA/IIÖ survey ^{a)}	29.51	29.36	30.29	31.74			
Verified emissions ^{b)}					33.37		
Allocation NAP-1 incl. reserve ^{c)}					32.74	33.09	33.17
Allocation NAP-1 without reserve					32.41	32.76	32.84
Total greenhouse gas emissions	82.6	80.8	81.3	85.1			
Share of total greenhouse gas emissions	35.7%	36.3%	37.3%	37.3%			
Total CO₂ emissions	66.83	65.44	66.18	70.17			
Share of total CO₂ emissions	44.2%	44.9%	45.8%	45.2%			

a) For the base period 1998-2001, the emission values of all installations subject to emissions trading / NAP-1 from the surveys conducted by the Federal Environment Agency and the Institute of Industrial Ecology are available.

b) Verified emission declarations pursuant to EZG

c) Allocation in accordance with NAP-1 for 2005-2007

Table 2: Part of overall emissions NAP-2 (2008-2012) generated by the installations under the emissions trading scheme

	2002	2003	2004	2005	2008-2012
UBA/IIÖ survey ^{a)}	30.44	33.28	32.96	33.77	
Allocation NAP-2 incl. reserve ^{b)}					30.73 p.a.
Allocation NAP-2 without reserve					30.42 p.a.
Total greenhouse gas emissions	86.8	92.5	91.3		77.8 p.a.
Share of overall greenhouse gas emissions	35.1%	36.0%	36.1%		39.5%
Total CO₂ emissions	71.93	77.55	77.08		
Share of overall CO₂ emissions	42.3%	42.9%	42.8%		

a) For the base period 2002-2005, the emission values of all installations subject to emissions trading / NAP-2 from the surveys conducted by the Federal Environment Agency and the Institute of Industrial Ecology are available.

b) Allocation in accordance with NAP-1 for 2005-2008 and in accordance with the present NAP-2 draft for 2008-2012

Admissible part of reduction units from JI/CDM projects in accordance with Directive 2004/101/EC

The installation operators affected by the allocation plan 2008-2012 may, to a limited extent, offset their emissions using reduction units from JI or CDM projects within the meaning of the so-called "Linking Directive". The proportion of reduction units used in such a way may not exceed 10% per installation of the allowances allocated in accordance with this allocation plan. In particular, this proportion is fixed in consideration of the so-called "supplementarity", whereby flexible Kyoto mechanisms may only be used to supplement reduction measures within a country (NB: within the national JI/CDM programme 45 million tons CO₂-equivalent are planned so far for the 2008-2012 period).

1.4 What policies and measures will be applied to the sources not covered by the emissions trading Directive? Will use be made of the flexible mechanisms of the Kyoto Protocol? If so, to what extent and what steps have been taken so far (e.g. advancement of relevant legislation, budgetary resources foreseen)?

Climate Strategy – measures aimed at other sources of emissions

The Austrian climate policy is based on the national climate strategy which was decided in the Council of Ministers on 18 June 2002 and formally adopted by the Conference of Provincial Governors in October 2002. The amended Climate Strategy was adopted by the Federal Government on 21 March 2007.

The national climate strategy sets out the areas where measures and activities are needed to meet the Austrian climate change mitigation target. Each sector is assigned a precise reduction potential that it should realise until 2008-2012 by implementing the measures and activities outlined in the climate strategy.

Since 1990, and especially since the Austrian climate strategy was formulated, a large number of measures have been put in place to reduce greenhouse gas emissions. An evaluation of these measures by the Energy Agency and the Federal Environment Agency was published in a final report in 2006 (available at www.klimastrategie.at).

In an *ex post* evaluation of the measures set out in the climate strategy by the Federal Environment Agency and the Energy Agency (i.e. an analysis of the actually observed effectiveness of measures launched in the 2000-2003 period), the reductions achieved were calculated on the basis of the data for 2003. The result of the evaluation was a total effect of 1.3 – 2.7 million tons of CO₂-equivalents for 2003.

In an *ex ante* evaluation (i.e. an analysis of the effectiveness of measures launched during 2003-2010 that can reasonably be expected), the potential of measures for the year 2010 were examined. A total reduction effect of 7.9 million tons of CO₂-equivalents, brought about by the measures already operational or currently being implemented, has been calculated for 2010.

Amendment of Climate Strategy 2007

The Climate Strategy has been amended on the basis of an evaluation by the Energy Agency and the Federal Environment Agency. *Additional measures* have been defined for the energy generation, home heating/small scale use, industry and traffic sectors, which, in conjunction with the "climate protection contributions" of the EU ETS sectors will ensure that the Kyoto target is met.

Environmental support schemes in Austria

One of the central policy instruments of the federal government concerning climate protection is the environmental support in Austria pursuant to the Environmental Support Act. In the environmental support scheme (evaluation period January 2003 to December 2006), greenhouse gas emissions were reduced by 2.6 millions tons of CO₂ equivalents p.a. through subsidised project in Austria.

Table 3: Reduction of greenhouse gas emissions through environmental support measures in Austria (UFI) from 2003 to 2006.

Year	Number	Environmental investment costs	Net subsidy	CO ₂ reduction p.a.
2003	905	192,163,990	40,398,475	686,468
2004	961	282,003,083	53,207,075	567,341
2005	1,387	333,111,991	63,011,189	645,053
2006	2,333	437,590,196	75,654,938	717,659
Total	5,586	1,244,869,260	232,271,677	2,616,521

Source: Kommunalkredit Public Consulting, BMLFUW 2006

Flexible mechanisms of the Kyoto Protocol

The JI/CDM programme constitutes the fourth pillar of the Austrian federal environmental support system (the other pillars being environmental support in Austria and abroad and urban water management); the Environmental Support Act ("Umweltförderungsgesetz", UFG) was amended in this regard in 2003. The company commissioned to carry out programme management is Kommunalkredit Public Consulting GmbH (KPC).

By the end of 2006, 19 Memoranda of Understanding have been finalised, 8 with Annex-I countries and 11 with non-Annex-I countries. By December 2006, 31 projects had been contracted. Moreover, contributions to Community Development Carbon Fund of the World Bank (CDCF) and two carbon facilities (EcoSecurities, South Pole Carbon Procurement Facility) were received through the programme. In total, 26.08 million emission reduction units were thereby contracted.

Approximately 170 projects have been in the pipeline at various stages of development by end of 2006.

73 million euros were available for programme financing between 2003 and 2006. For 2007 and 2008, additional 46 and 56 million euros, respectively, are secured in the federal budget. This budget permits a purchasing volume of at least 35 million certificates, i.e. 7 million certificates for each year of the commitment period. A further increase of the purchasing volume to 45 million emission reduction units is scheduled in connection with the amendment of the climate strategy. The government programme for the 2007-2010 legislative period makes reference to the necessity of additional funding for climate change purposes.

1.5 How has national energy policy been taken into account when determining the total quantity of allowances to be allocated? How is it ensured that the total quantity of allowances intended to be allocated is consistent with a path towards achieving or over-achieving the Member State's target under Decision 2002/358/EC or under the Kyoto Protocol?

Austria aims to further increase the share of renewable energy sources used in power generation, which is already above the European average, to 78.1% in 2010 in accordance with Directive 2001/77/EC on the promotion of renewable sources of energy⁵. Therefore, Austria continues to push ahead with the promotion of renewable energy sources with its green electricity policy and the limitation of free-of-charge CO₂ emission allowances in the emissions trading scheme. The new Green Electricity Act (2006) sets the scene for an economically efficient and environmentally friendly continuation of the promotion of green electricity, hydroelectricity (small and medium power generation levels) and CHP. This will ensure the attainment in 2010 of a green electricity ratio of 10% and an additional reduction effect of approximately 1 million tons CO₂-equivalent.

⁵ In a footnote to the Directive, Austria states that the value of 78.1% is realistic if one assumes that gross domestic consumption of electricity is at 56.1 TWh_{el}.

1.6 How is it ensured that the total quantity of allowances to be allocated is not more than is likely to be needed for the strict application of the criteria of Annex III? How is consistency with the assessment of actual and projected emissions pursuant to Decision 93/389/EEC ensured?

For the CO₂ forecasts it was assumed that, in essence, the de-coupling of production development from greenhouse gas emission intensity and energy intensity observed in the past will continue in the future. In addition, the KWI/WIFO studies also took into account technological leaps and improvements in CO₂ intensity. This is consistent with the Austrian Kyoto target, because this allocation complies with the climate strategy, in which the national burden sharing, i.e. the reduction contributions to be made by the different sectors, has been agreed.

1.7 Please explain in section 4.1 how the potential, including the technological potential, of activities to reduce emissions was taken into account in determining the total quantity of allowances.

See section 4.1

1.8 Please list in section 5.3 the Community legislative and policy instruments that were considered in determining the total quantity of allowances and state which ones have been taken into account and how.

See section 5.3

1.9 If the Member State intends to auction allowances, please state the percentage of the total quantity of allowances that will be auctioned, and how the auction will be implemented.

A proportion of approx. 1.3% of the total quantity of allowances will be auctioned in accordance with Article 10 of the Emissions Trading Directive.

2 Assessment of the quantity of allowances at activity level

2.1 By what methodology has the allocation been determined at activity level? Has the same methodology been used for all activities? If not, explain why a differentiation was done, in detail, and why this is considered not to unduly favour certain undertakings or activities within the Member State.

The allocation of allowances at activity level has been carried out in two steps:

1. Allocation at sector level
2. Allocation at sub-sector level

The activities that fall under the Emissions Trading Directive are divided into two categories, which are oriented toward the existing IPCC Reporting Guidelines: energy industries (power and heat generation as well as mineral oil processing, category **1A1** in accordance with the Revised IPCC GHG Inventory Guidelines), and manufacturing industries & industrial processes (categories **1A2+2**). The two categories are subdivided into sectors, which in turn are structured into sub-sectors (in the sector Other Industries).

Table 4: Overview of sectors and sub-sectors

Sectors	Sub-sectors
<u>Energy Industries:</u> Electricity generation District heating Mineral oil processing	<i>Electricity generation</i> <i>District heating</i> <i>Mineral oil processing</i>
<u>Industry:</u> Integrated steelworks Other Industries →	<i>Integrated steelworks, roasting and sintering installations for metal production</i> <i>Other iron and steel processing industries</i> <i>Cement industry</i> <i>Paper industry</i> <i>Chemical industry/textile industry</i> <i>Lime industry</i> <i>Refractory products</i> <i>Brick industry</i> <i>Food industry</i> <i>Glass industry</i> <i>Wood industry</i> <i>Machine construction, steel and automotive industries</i>

The emissions of the 2002-2005 period of all installations within the scope of the Emissions Trading Directive have been measured and verified by the Federal Environment Agency in co-operation with the Institute of Industrial Ecology (see Annex "Data survey by UBA/IIÖ").

On the basis of these historical base data, trend analyses were calculated by WIFO and consultancy KWI for each of the sectors and sub-sectors (see "Trend analyses of WIFO/KWI"). In these trend analyses, expected CO₂ emissions were determined on the basis of the product volume and the energy and CO₂ intensity. Essentially under the assumption of the continuation of the past trend (e.g. constant increase in energy efficiency, production growth), forecast values are calculated for the emission allowance requirement of a sector or sub-sector for the period 2008-2012. In the following, the forecast values are referred to as *business as usual* values (BAU).

The trend values used in the allocation plan 2008-2012 are those of September 2006.

The number of allocated allowances of a sector is the sum of the *business as usual* values (WIFO/KWI) of all sub-sectors of a sector deducted by the sector's climate protection contribution towards the Kyoto target.

Calculation of allowances available to a sector:

$$\text{Total no. of allowances}_{\text{sector}} = \left(\sum \text{BAU}_{\text{sub-sectors}} - \text{climate protection contribution}_{\text{sector}} \right)$$

To calculate the number of allowances available to the sub-sectors (within any given sector), the above figure is multiplied by the reserve factor (the reserve quota is 1% of the total quantity). Furthermore, the politically agreed quantity to be auctioned is subtracted (100,000 allowances p.a. in the electricity sector and 300,000 allowances for all other sectors, which corresponds to an auction quota of 1.29% and 1.31% respectively).

$$\text{Free allocation}_{\text{sector}} = \text{total quantity of allowances}_{\text{sector}} * \text{reserve factor} - \text{auction quota}_{\text{sector}}$$

Table 5: Business as usual values of sectors and climate protection contributions

Sector	Business as usual value 2008-12 ^{a)}	Climate protection contribution 2008-12	Reduction compared to business as usual	Total quantity of emission allowances 2008-12	Emission allowances auctioned	Auctioned share of total quantity	Free allocation (incl. reserve)	New entrants reserve	Reserve share of total quantity	Free allocation (without reserve) ^{b)}
	[t CO2/a]	[t CO2/a]	%	[t CO2/a]	[t CO2/a]	%	[t CO2/a]	[t CO2/a]	%	[t CO2/a]
ENERGY	15.712.774	-4.548.170	-28,9%	11.164.604	144.286	1,29%	11.020.318	111.643	1,0%	10.908.675
Electricity generation sector	11.829.042	-4.052.877	-34,3%	7.776.165	100.000	1,29%	7.676.165	77.762	1,0%	7.598.403
District heating sector	628.271	-73.507	-11,7%	554.764	7.251	1,31%	547.513	5.544	1,0%	541.969
Mineral oil processing sector	3.255.461	-421.786	-13,0%	2.833.675	37.035	1,31%	2.796.640	28.337	1,0%	2.768.303
INDUSTRY	22.446.402	-2.881.100	-12,8%	19.565.302	255.714	1,31%	19.309.588	195.651	1,0%	19.113.937
Integrated steelwork sector	12.729.093	-1.960.199	-15,4%	10.768.894	140.747	1,31%	10.628.147	107.690	1,0%	10.520.457
Other industries sector	9.717.309	-920.901	-9,5%	8.796.408	114.967	1,31%	8.681.441	87.961	1,0%	8.593.480
Total	38.159.176	-7.429.270	-19,5%	30.729.906	400.000	1,30%	30.329.906	307.294	1,0%	30.022.612

a) The *business as usual* value of the power generation sector for the period 2008-2012 takes into account the partial renewal or increase in the number of power plants (planned natural gas power plants).

b) The quantity allocated takes into account the existing installations as well as new installations which are allocated in accordance with section 11 (7) EZG. Planned new power producing installations, which did not have a permit by 31 March 2006 will principally be allocated from the new entrants reserve (in case of closure of existing installations, allowances allocated are being transferred to the new entrants reserve).

Allocation at sub-sector level

Allowances were allocated at sub-sector level on the basis of the data from the determination of historical emissions (described above), as well as the trend analyses of CO₂ emissions (also described above), and taking into account a potential factor that reflects the potential of the sub-sector to reduce its CO₂ emissions.

$$\text{Allocation}_{(08-12)} \text{ for sub-sector} = \text{Allocation base}_{\text{sub-sector}} * GF_{\text{sub-sector}} * PF_{\text{sub-sector}} * CF_{\text{sub-sector}}$$

Allocation base: a sub-sector's allocation base always equates to the average emissions in the period 2002-2005 in accordance with the results of the survey by the Federal Environment Agency and the Institute of Industrial Ecology. If there is a discrepancy between the allocation base and the base emissions 2002-2005, the period indicated was either not representative for certain installations or new installations were added to the allocation base in accordance with section 11 (7) EZG.

$GF_{sub-sector}$ (*growth factor of the sub-sector*): this is calculated with the BAU scenario from the WIFO/KWI study for the sub-sector concerned.

$PF_{sub-sector}$ (*potential factor of the sub-sector*): this is calculated on the basis of the sum of installation potential factors weighted by the fossil CO₂ emissions (see section 8.5 "Potential factor").

$CF_{sub-sector}$ (*compliance factor of the sub-sector*): to harmonise the number of allowances allocated at sub-sector level with the number of allowances available to the sector, a compliance factor is applied, which is of the same magnitude for all sub-sectors within a sector.

Calculation of the compliance factor CF :

$$CF_{sub-sector} = \text{Free allocation}_{sector} / \left(\sum \text{Allocation base}_{sub-sectors} * GF_{sub-sector} * PF_{sub-sector} \right)$$

Table 6: Calculation of allocation at sub-sector level

Sector / sub-sector	Emissions 2002-2005	Allocation base	Growth factor	Business as Usual 2008-2012	Potential factor PF_B	Compliance factor (CF_{Sector})	Free allocation (without reserve)
	[t CO ₂ /a]	[t CO ₂ /a]		[t CO ₂ /a]			[t CO ₂ /a]
ENERGY	14.036.625	13.770.964	1,141	15.712.774	0,821	0,848	10.908.675
Electricity generation sector	10.705.158	10.138.084	1,167	11.829.042	0,777	0,826	7.598.403
District heating sector	555.542	598.475	1,050	628.271	0,957	0,902	541.969
Mineral oil processing sector	2.775.925	3.034.405	1,073	3.255.461	0,942	0,902	2.768.303
INDUSTRY	18.521.929	20.008.911	1,122	22.446.402	0,946	0,902	19.113.937
Integrated steelwork sector	10.354.543	11.013.618	1,156	12.729.093	0,917	0,902	10.520.457
Other industries sector	8.167.386	8.995.294	1,080	9.717.309	0,981	0,902	8.593.480
<i>Other iron and steel industry</i>	73.337	78.541	1,314	103.217	0,977	0,902	90.929
<i>Cement industry</i>	2.697.639	3.012.132	1,051	3.165.732	0,967	0,902	2.760.527
<i>Paper industry</i>	2.126.325	2.358.448	1,044	2.462.466	1,000	0,902	2.218.953
<i>Chemical industry</i>	860.595	861.362	1,120	965.090	0,976	0,902	849.082
<i>Lime industry</i>	739.644	850.004	1,156	982.517	0,989	0,902	875.682
<i>Refractory products</i>	513.544	522.438	1,111	580.535	0,974	0,902	509.576
<i>Brick industry</i>	334.107	367.205	1,133	416.102	0,985	0,902	369.495
<i>Food industry</i>	335.277	425.333	1,030	437.924	0,977	0,902	385.849
<i>Glass industry</i>	197.732	215.948	1,125	242.921	0,966	0,902	211.580
<i>Wood industry</i>	208.112	214.635	1,212	260.232	0,998	0,902	234.184
<i>Machine construction, steel and automotive</i>	81.074	89.248	1,127	100.573	0,966	0,902	87.622
Total	32.558.554	33.779.875	1,130	38.159.176	0,895	0,881	30.022.612

2.2 If the potential, including the technological potential, of activities to reduce emissions was taken into account at this level, please state so here and give details in Section 4.1 below.

The potential of activities to reduce their emissions – including the technological potential – has been taken into account by way of the potential factor described in section 2.1 (see section 8.5 "Potential factor").

2.3 If Community legislative and policy instruments have been considered in determining separate quantities per activity, please list the instruments considered in Section 5.3 and state which ones have been taken into account and how.

See section 5.3.

2.4 If the existence of competition from countries or entities outside the Union has been taken into account, please explain how.

The competition aspect was taken into account to a sufficient extent by the reduction of the number of allowances in comparison to forecast emissions during the allocation period and by creation of a reserve for new entrants or installation enhancements. Austria takes the view of the *Guidance Paper* from the European Commission that possible distortions of competition towards installations outside the EU need not primarily be caused by the allocation of allowances within the emissions trading scheme, but also by other factors determining the general competitive position of countries. These may be issues such as direct taxation, or salary and education levels.

The question of competition within the European Union seems to be of much greater importance, as there is a danger of differing classifications when implementing the Emissions Trading Directive and different levels of allocation (for example in comparison to the production volume) in the different Member States.

3 Assessment of the quantity of allowances at installation level

3.1 By what methodology has the allocation plan been determined at installation level? Has the same methodology been used for all installations? If not, please explain why a differentiation between installations belonging to the same activity was considered necessary, how the differentiation by installation was done, in detail, and why this is considered not to unduly favour certain undertakings within the Member State.

The same method of allocation of allowances was used for all installations.

The allocation was carried out on the basis of the following calculation:

$$\text{Allocation}_{(08-12)} = \text{Allocation base} * PF_A * CF_A$$

Allocation base: basically, an installation's allocation base corresponds to the average emissions of 2002-2005, as determined by the Federal Environment Agency and the Institute of Industrial Ecology. In the event that these values are not representative, a different allocation base will be applied.

In general terms, the National Allocation Plan provides for an adaptation of the base period if the historical emission data show that the emissions of the last two years for which data are available deviates substantially from the average value of the period 2002-2005. In such cases, the non-representative years (in view of the trading period 2008-2012) are excluded from the allocation base.

Moreover, in single cases, data and statements of fact submitted subsequently by installation operators are taken into account to guarantee that allocation complies with EZG.

PF_A (potential factor of the installation): the potential factor takes into account the process emissions, CO₂ intensity of fuel use, CHP bonus, waste heat bonus, BAT penalty (see section 8.5 "Potential factor"). This does not apply to the energy sector, for which a *benchmarking* approach is used (compare section 8.5.2).

CF_A (compliance factor of the installation): the compliance factor brings the number of allowances allocated at installation level in line with the number of allowances allocated to the sub-sector; it is the same for all installations of a sub-sector.

Calculation of the compliance factor:

$$CF_A = \text{Allocation to sub-sector} / \sum_{\text{installations}} \text{Allocation base}_{\text{installation}} * PF_A$$

3.2 If historical emissions data were used, please state whether they have been determined in accordance with the Commission's monitoring and reporting guidelines pursuant to Article 14 of the Directive or any other set of established guidelines, and/or whether they have been subject to independent verification.

The survey of base period emissions data (2002-2005) took into account the Commission's guidelines on monitoring and reporting laid down in Article 14 of the Directive. The emissions data was collected by Federal Environment Agency and Institute of Industrial Ecology using electronic questionnaires which had been sent to the companies for completion. Subsequently, the Federal Environment Agency and Institute of Industrial Ecology checked the data for completeness and plausibility. Data time series for 2002-2005 have been compared with the outcome of the data survey for the first NAP (1998-2001/2002). In cases of uncertainty with respect to submitted data, those have been clarified in direct contact with installation operators.

Emission reports for 2005 submitted in the context of the EU ETS have been checked by independent verifiers and results of the survey have been adjusted accordingly. No further auditing of the data by independent experts was carried out (esp. for the years 2002-2004).

3.3 If early action or clean technology were taken into account at this level, please state so here and give details in Sections 4.2 and/or 4.3 below.

During allocation at installation level, early action was only accounted for indirectly (via the potential factor). The use of clean technologies was taken into account. See sections 4.2 and 4.3.

3.4 If the Member State intends to include unilaterally installations carrying out activities listed in Annex I below the capacity limits referred to in that Annex, please explain why, and address, in particular, the effects on the internal market, potential distortions of competition and the environmental integrity of the scheme.

There are no plans to extend the emissions trading scheme to generally include installations operating below the stated capacity limits.

4 Technical aspects

4.1 Potential, including the technological potential

4.1.1 Has criterion (3) been used to determine only the total quantity of allowances, or also the distribution of allowances between activities covered by the scheme?

Criterion 3 (potential to reduce emissions) was also applied for the allocation at activity level.

4.1.2 Please describe the methodology (including the major assumptions made) and any sources used to assess the potential of activities to reduce emissions. What are the results obtained? How is it ensured that the total quantity of allowances allocated is consistent with the potential?

The described technological potential is used to evaluate the potential to reduce emissions; for energy transformation in an industry, the potential is derived from the climate strategy; at installation and sub-sector level, a differentiation is achieved via the potential factor. To evaluate the economic potential at sub-sector allocation levels, WIFO and company KWI elaborated business as usual calculations with the aim to differentiate the allocation. The compliance factor guarantees that the number of allocated allowances is kept in line with the allowed total quantity.

In the data survey conducted by Federal Environment Agency and Institute of Industrial Ecology (see Annex "Data survey by UBA/IIÖ ") the reported data was checked for compliance of the installation with the *best available technique* in accordance with BREF documents and other relevant standards. It is made explicit for every installation, whether it complied with the standards or whether there were any discrepancies (see section 4.1.4).

4.1.3 Please explain the method or the formula(e) used to determine total quantity of allowances to allocate at the total level and/or activity level taking the potential of activities to reduce emissions into account.

See sections 2 and 3, as well as section 8.5 "Potential factor".

4.1.4 If benchmarking was used as a basis for determining the intended allocation to individual installations, please explain the type of benchmark used, and the formula(e) used to arrive at the intended allocation in relation to the benchmark. What benchmark was chosen, and why is it considered to be the best estimate to incorporate achievable progress? Why is the output forecast used considered to be the most likely development? Please substantiate the answers.

In the general context of the National Allocation Plan, *benchmarking* was considered to be an appropriate concept of allocation solely for the electricity sector in the meaning of the *Guidance Paper* sections 75 and following.

The allocation of emission allowances was based on the average specific greenhouse gas emissions of the fuel, the energy efficiency and the progress attainable in these areas of activity. To this end, benchmarks from the BAT reference documents (BREFs) drawn up in accordance with Article 16 section 2 of Directive 96/61/EC of the Council concerning integrated pollution prevention and control, OJ No. L 257 of 10 October 1996, pp. 26, were used. Where no such documents existed for the activity concerned, other objective and transparent benchmarks were used.

4.2 Early action

4.2.1 If early action has been taken into account in the allocation to individual installations, please describe in which manner it is accommodated. Please list and explain in some detail the measures that were accepted as early action and what the criteria for accepting them were. Please demonstrate that the investments/actions to be accommodated led to a reduction of covered emissions beyond what followed from any Community or national legislation in force at the time the action was taken.

Early action, in the meaning of measures that reduce the specific emissions of installations included in the emissions trading scheme, are not taken into account in themselves, but via the potential factor, which makes reference to the emission factors of the fuels used, compliance with BAT and the use of CHP technology and the extraction of waste heat (see section 8.5 "Potential factor").

4.2.2 If benchmarks are used, please describe on what basis the grouping of installations to which the benchmarks are applied was made and why the respective benchmarks were chosen. Please also indicate the output values applied and justify why they are considered appropriate.

See section 4.1.4.

4.3 Clean technology

4.3.1 How has clean technology, including energy efficient technologies, been taken into account in the allocation process?

The use of clean technologies is taken into account at installation level by granting a bonus (technically by increasing the potential factor by 4 percent points). In concrete terms, the bonus becomes applicable for CHP technology and the extraction of waste or process heat. For further details, please see section 8.5 (Potential factor).

4.3.2 If at all, which clean technology has been taken into account, and on what basis does it qualify as such? Have any energy production technologies intended to be taken into account been in receipt of approved State aid for environmental protection in any Member State? Please state whether any other industrial technologies intended to be taken into account constitute "best available techniques" as defined in Council Directive 96/61EC, and explain in what way it is particularly performing in limiting emissions of covered greenhouse gases.

As combined heat and power and the re-use of waste heat play such an important role in improving overall energy efficiency, and to promote district heating schemes, these technologies are given special consideration in keeping with the Austrian climate strategy.

5 Community law and Community policy

5.1 Competition policy (Articles 81-82 and 87-88 of the Treaty)

5.1.1 If the competent authority has received an application from operators wishing to form a pool and if it is intended to allow it, please attach a copy of that application to the National Allocation Plan. What percentage of the total allocation will the pool represent? What percentage of the relevant sector's allocation will the pool represent?

The Emission Allowance Trading Act provides for the possibility of "pooling" (i.e. a number of installation operators combine their allowances and hand them over to a trustee). Thus far, however, no application for "pooling" has been received by the BMLFUW.

5.2 Single market policy - new entrants (Article 43 of the Treaty)

5.2.1 How will new entrants be able to begin participating in the EU emissions trading scheme?

A reserve is formed for free allocation to new entrants.

5.2.2 In the case that there will be a reserve for new entrants, how has the total quantity of allowances to set aside been determined and on what basis will the quantity of allowances be determined for each new entrant? How does the formula to be applied to new entrants compare to the formula applied to incumbents of the relevant activity? Please also explain what will happen to any allowances remaining in the reserve at the end of the trading period. What will apply in case the demand for allowances from the reserve exceeds the available quantity of allowances?

As provided for in the Emission Allowance Trading Act (EZG), at least 1% of the total quantity of allowances are kept in reserve for each period, and are given to new entrants free of charge.

The created reserve, with 1% of the allowances for the 2008-2012 period, is not divided into annual quantities, but is available as a total quantity of 1.54 million allowances for the entire period. The reserve is formed by deducting 1% from the total quantity before allocation to sub-sectors and installations.

In the event that the reserve proves insufficient to cover allocation to new entrants, allowances are being purchased up by an appropriate entity upon instruction by the Federal Minister of Agriculture, Forestry, Environment and Water Management and made available free of charge to the installation operators based on a new provision in the Emission Allowance Trading Act, entered into force on 29 December 2006. In the following period (2013-2017) a corresponding number of allowances is refunded to the buying entity from the reserve made available for use in the market.

The allowances are allocated to the installation operators following a substantiated application. The applications are processed in ascending order of date of the first instance permit based on the laws applicable to installations. The installation operator shall provide the Federal Minister of Agriculture, Forestry, Environment and Water Management with an official letter of approval compliant with the laws applicable to installations, within six weeks after approval. If possible, the authorisation in accordance with Sec. 4 EZG should be submitted at the same time as the letter of approval compliant with the laws applicable to installations.

The quantity of allowances allocated to the relevant installation is calculated in the same way as for installations for which a full application has been made before the deadline laid down in Sec. 11 (7) EZG. The provisions of Sec. 11 (7) apply, i.e. the following factors must be considered:

- the authorised capacity of the installation;
- the average capacity utilisation observed, on average, in installations in the sub-sector;
- the capacity utilisation of the installation to be expected during the period;
- the emissions of the installations to be expected under the assumption that the latest technology is used.

Allowances that are no longer allocated to the operators in accordance with Sec. 17 (3) EZG because of the closure of the installation in the years of the period following closure, or that the operator must return to the authority, become part of the reserve, provided they are not transferred to a new installation of the same operator. This allows the reserves to be replenished over the period. The returned allowances can also be allocated to installation operators who have filed an application for allocation of allowances from the reserve. Again, allowances are allocated in ascending order of date of approval. If there are no open applications, the allowances remain in reserve until such an application is made.

5.2.3 Is information already available on the number of new entrants to expect (through applications for purchase of land, construction permits, other environmental permits etc.)? Have new or updated greenhouse gas emission permits been granted to operators whose installations are still under construction, but whose intention it is to start a relevant activity during the period 2008 to 2012?

The Ministry of the Environment has information from the survey of emissions in the base period 2002-2005 on new installations approved before the deadline of 31 March 2006, for which approval has been given or full applications have been received in accordance with sec. 11 (7) EZG. These "known" new installations must be included in the allocation plan if they have received a permit before the deadline. New installations, for which only *applications* for operation permits existed until 31 March 2006, must also be taken into account in the allocation plan, but allowances shall only be allocated if the duration of the installation permit procedure and the date of starting operation can be narrowed down to precise dates. If this is in significant doubt, these installations shall be treated as new entrants after approval under the laws applicable to installations, and to be provided with allowances from the reserve. The thus affected installations are marked accordingly in the list of installations.

Until June 2007, 11 applications for allocation of allowances from the new entrants reserve for the period 2008-2012 were put forward to the Federal Ministry of Agriculture, Forestry, Environment and Water Management. Installation operation permits are already given in these cases. There is currently no reliable information on further potential new entrants who have not yet made an application for allocation (and apparently still lack installation operation permits).

5.3 Other legal or political instruments

5.3.1 Please list other Community legislation or policy instruments that were considered in the establishment of the National Allocation Plan and explain how each one has influenced the intended allocation and for which activities.

The following legal instruments of the EU have been considered in the definition of allocation quantities regarding a possible effect on the carbon dioxide emissions of the sub-sectors and installations included in the emissions trading scheme:

- Directive 1996/61/EC concerning integrated pollution prevention and control
- Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC
- Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market
- Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants

- Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants
- Directive 2002/91/EC on the energy performance of buildings
- Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport
- Directive 2004/8/EC on the promotion of cogeneration based on a useful heat demand in the internal energy market
- Directive 2006/32/EC on energy end-use efficiency and energy services

5.3.2 Has any particular new Community legislation been considered to lead to an unavoidable decrease or increase in emissions? If yes, please explain why the change in emissions is considered to be *unavoidable*, and how this has been taken into account.

The implementation of Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC and in particular the voluntary bringing forward of the production of sulphur-free fuels agreed between the BMLFUW and the OMV refinery will bring about an unavoidable increase in CO₂ emissions from the refinery.

Apart from the direct reference to EC Directives, the allocation plan also takes into account if an installation has higher CO₂ emissions because of environmental protection measures implemented on the basis of Austrian statutory law or on a voluntary basis, than it would normally have without these measures. Any emissions that are ascribed to these measures are treated as process emissions, i.e. with potential factor 1.

The monitoring of possible interactions between the National Allocation Plan and Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market has shown that such direct interactions are unlikely because the areas of application and the intentions of the two instruments are different from each other.

6 Consultation of the public

6.1 How is this national allocation plan made available to the public for comments?

The installation operators were notified of the envisaged numbers of allowances allocated to installations concerned by registered mail at the beginning of August 2006 in the course of a first consultation phase pursuant to Sec. 11 (9) of the Emission Allowance Trading Act⁶. The operators then had an opportunity to respond within 6 weeks of notification.

The then revised draft National Allocation Plan was published on the BMLFUW website (www.eu-emissionshandel.at) on 17 October 2006. Pursuant to Sec. 11 (10) of the Emission Allowance Trading Act⁷, the general public, but also installation operators, were able to comment on the draft within six weeks.

6.2 How does the Member State provide for due account to be taken of any comments received before a decision on the allocation of allowances is taken?

The statements made on the draft allocation plan were verified for the legal relevance and appropriateness and published at the website www.eu-emissionshandel.at.

6.3 If any comments from the public received during the first round of consultation have had significant influence on the national allocation plan, the Member State should summarise those comments and explain how they have been taken into account.

The statements are suitably taken into account in the final allocation plan.

⁶ as amended by Federal Law Gazette I No. 171/2006, entered into force on 29 December 2006 (prior to taking effect: Sec. 13 (1) EZG)

⁷ as amended by Federal Law Gazette I No. 171/2006, entered into force on 29 December 2006 (prior to taking effect: Sec. 13 (2) EZG)

7 Criteria other than those of Annex III of the Directive

7.1 Have any criteria other than those listed in Annex III to the Directive been applied for the establishment of the notified National Allocation Plan? If yes, please specify which ones and how they have been implemented.

No criteria other than those listed in Annex III of the Directive have been applied.

7.2 Please also justify why any such criteria are not considered to be discriminatory.

See section 7.1

8 Annex

8.1 List of Installations

8.1.1 Please submit a matrix containing the following information:

- Identification (e.g. name, address) of each installation
- The name of the operator of each installation
- The number of the greenhouse gas emissions permit
- The unique (EPER) identifier of the installation
- The main activity, and, if applicable, other activities carried out at the installation
- Total quantity of allowances to be allocated for the period, and the annual breakdown, for each installation
- Whether the installation has been unilaterally included or temporarily excluded and whether it is part of a pool
- Annual data per installation, including emission factors if emissions data are used, which have been used in the allocation formula(e)
- A subtotal per activity of data used and number of allowances allocated

Table 7: Annual allocations to installations and total quantities for 2008-2012, less reserve (1%) and auction quota.

Codes	Installation name	2008	2009	2010	2011	2012	Total 2008-2012
	I. ENERGY	10.872.597	10.738.489	10.977.430	10.977.430	10.977.430	54.543.376
	Electricity Generation Sector	7.562.325	7.428.217	7.667.158	7.667.158	7.667.158	37.992.016
EEW001	Energie AG OÖ KW Riedersbach	437.140	437.140	437.140	437.140	437.140	2.185.700
EEW002	Energie AG OÖ KW Timelkam II	171.714	37.606	37.606	37.606	37.606	322.138
EEW004	EVN KW Dürnrohr	901.136	901.136	901.136	901.136	901.136	4.505.680
EEW007	Verbund KW Dürnrohr	1.139.438	1.139.438	1.139.438	1.139.438	1.139.438	5.697.190
EEW009	Verbund FHKW Mellach	734.102	734.102	734.102	734.102	734.102	3.670.510
EEW011	Verbund KW St. Andrä	0	0	0	0	0	0
EEW012	Verbund KW Voitsberg	0	0	0	0	0	0
EEW015	Verbund KW Zeltweg	0	0	0	0	0	0
EEW014	Verbund FHKW Werndorf 2	250.267	250.267	250.267	250.267	250.267	1.251.335
EEW025	Salzburg AG FHKW Nord	61.991	61.991	61.991	61.991	61.991	309.955
EEW003	Energie AG OÖ KW Timelkam III	6.268	6.268	6.268	6.268	6.268	31.340
EEW005	EVN KW Korneuburg	102.267	102.267	102.267	102.267	102.267	511.335
EEW006	EVN KW Theiß	449.521	449.521	449.521	449.521	449.521	2.247.605
EEW008	Verbund KW Korneuburg	0	0	0	0	0	0
EEW013	Verbund FHKW Werndorf 1	0	0	0	0	0	0

EEW018	EVN BHKW Krankenhaus Mistelbach ⁸	3.206	3.206	3.206	3.206	3.206	16.030
EEW019	EVN FHKW Mödling	20.316	20.316	20.316	20.316	20.316	101.580
EEW020	EVN Cogen Salzer St. Pölten	42.675	42.675	42.675	42.675	42.675	213.375
EEW021	Linz Strom FHKW Mitte Linie 1a	272.540	272.540	272.540	272.540	272.540	1.362.700
EEW022	Linz Strom FHKW Mitte Linie 1b	0	0	238.941	238.941	238.941	716.823
EEW023	Linz Strom FHKW Süd	306.698	306.698	306.698	306.698	306.698	1.533.490
EEW024	Salzburg AG FHKW Mitte	181.423	181.423	181.423	181.423	181.423	907.115
EEW028	Wels Strom FHKW Wels	74.703	74.703	74.703	74.703	74.703	373.515
EEW029	Wienstrom KW Leopoldau	304.721	304.721	304.721	304.721	304.721	1.523.605
EEW030	Wienstrom KW Donaustadt	933.401	933.401	933.401	933.401	933.401	4.667.005
EEW031	Wienstrom KW Simmering Block 3	693.569	693.569	693.569	693.569	693.569	3.467.845
EEW230	Wienstrom Simmering Block 1+2 (existing installation)	475.229	475.229	475.229	475.229	475.229	2.376.145
EEW016	Energie AG GuD Kraftwerk Timelkam (new installation sec. 11/7) ⁹						
EEW210	Verbund GDK Mellach (new installation sec. 11/7) ⁹						
EEW209	Verbund GDK Klagenfurt (new installation sec. 11/7) ⁹						
EEW231	Wienstrom Simmering Block 1+2 (new installation sec. 11/7) ⁹						
	District Heating Sector	541.969	541.969	541.969	541.969	541.969	2.709.845
EFE017	Energie AG OÖ FW Kirchdorf	13.656	13.656	13.656	13.656	13.656	68.280
EFE027	Stw Klagenfurt FHKW Klagenfurt	151.140	151.140	151.140	151.140	151.140	755.700
EFE032	EVN FHW Baden	16.567	16.567	16.567	16.567	16.567	82.835
EFE033	EVN FHW Palmers Wr. Neudorf	7.119	7.119	7.119	7.119	7.119	35.595
EFE034	EVN FHKW Wr. Neustadt	5.940	5.940	5.940	5.940	5.940	29.700
EFE035	Salzburg AG HW Süd	411	411	411	411	411	2.055
EFE036	Linz Strom FHKW Dornach	142	142	142	142	142	710
EFE037	Steirische Gas-Wärme FHKW Graz	23.903	23.903	23.903	23.903	23.903	119.515
EFE038	CMST KW Thondorf Graz	89.789	89.789	89.789	89.789	89.789	448.945
EFE229	CMST Thondorf Graz BHKW (new installation Sec. 11/7)	11.724	11.724	11.724	11.724	11.724	58.620
EFE039	Kelag FHKW St. Magdalen	23.643	23.643	23.643	23.643	23.643	118.215
EFE040	StW St.Pölten FHKW Nord	52.901	52.901	52.901	52.901	52.901	264.505
EFE041	StW St.Pölten FHKW Süd	14.295	14.295	14.295	14.295	14.295	71.475
EFE042	Fernwärme Wien FHKW Spittelau	14.598	14.598	14.598	14.598	14.598	72.990
EFE043	Fernwärme Wien FHKW Süd Inzersdorf	6.952	6.952	6.952	6.952	6.952	34.760
EFE044	Fernwärme Wien FHKW Kagran	4.907	4.907	4.907	4.907	4.907	24.535
EFE045	Fernwärme Wien FW Leopoldau	3.435	3.435	3.435	3.435	3.435	17.175
EFE046	Fernwärme Wien FHKW Arsenal	4.997	4.997	4.997	4.997	4.997	24.985
EFE047	Bioenergie Kufstein	6.253	6.253	6.253	6.253	6.253	31.265

⁸ Opt-in installation⁹ Allocation from new entrants reserve planned

EFE048	STGW FW Voitsberg Bärnbach	20.716	20.716	20.716	20.716	20.716	103.580
EFE049	Salzburg AG LKH Salzburg	7.684	7.684	7.684	7.684	7.684	38.420
EFE050	Wärmebetriebe FHW Badgastein	8.794	8.794	8.794	8.794	8.794	43.970
EFE051	TILAK FHW Innrain Innsbruck	15.337	15.337	15.337	15.337	15.337	76.685
EFE052	Wärmebetriebe Lactoprot Hartberg	2.312	2.312	2.312	2.312	2.312	11.560
EFE053	ÖBB FHW Grillgasse Vienna	6.370	6.370	6.370	6.370	6.370	31.850
EFE054	ÖFWG FHW Scheydgasse Vienna	7.270	7.270	7.270	7.270	7.270	36.350
EFE055	ÖFWG FW Pinkafeld	11.573	11.573	11.573	11.573	11.573	57.865
EFE056	ÖFWG FW Linz Bindermichl	126	126	126	126	126	630
EFE057	Energie Klagenfurt GmbH Heizwerk Süd	719	719	719	719	719	3.595
EFE058	Stadtwärme Lienz / Lienz	2.017	2.017	2.017	2.017	2.017	10.085
EFE206	ÖBB TS plant Floridsdorf Vienna	6.679	6.679	6.679	6.679	6.679	33.395
	Mineral Oil Processing Sector	2.768.303	2.768.303	2.768.303	2.768.303	2.768.303	13.841.515
EMV059	OMV EPI Gasstation Aderklaa II	14.214	14.214	14.214	14.214	14.214	71.070
EMV060	OMV EPI Gasstation Aderklaa I	28.547	28.547	28.547	28.547	28.547	142.735
EMV061	OMV Raffinerie Schwechat	2.491.436	2.491.436	2.491.436	2.491.436	2.491.436	12.457.180
EMV232	OMV Biturox-Anlage (new installation sec. 11/7)	5.949	5.949	5.949	5.949	5.949	29.745
EMV233	OMV Ethylenanlage AC 2 Erweiterung (new installation sec. 11/7)	215.413	215.413	215.413	215.413	215.413	1.077.065
EMV234	OMV SNOx-Anlage (new installation sec. 11/7)	12.744	12.744	12.744	12.744	12.744	63.720
	II. INDUSTRY	18.928.092	19.052.632	19.196.320	19.196.320	19.196.320	95.569.684
	Integrated Steelwork Sector	10.520.457	10.520.457	10.520.457	10.520.457	10.520.457	52.602.285
IVA062	Voestalpine Stahl Linz	4.380.526	4.380.526	4.380.526	4.380.526	4.380.526	21.902.630
IVA063	Voestalpine Kokerei Linz	985.761	985.761	985.761	985.761	985.761	4.928.805
IVA064	Voestalpine Kraftwerk Linz	1.771.401	1.771.401	1.771.401	1.771.401	1.771.401	8.857.005
IVA235	Voestalpine L6 Erweiterung (new installation sec. 11/7)	556.899	556.899	556.899	556.899	556.899	2.784.495
IVA224	Voestalpine Stahl Linz sonstige Anlagen (not included in NAP I)	291.348	291.348	291.348	291.348	291.348	1.456.740
IVA065	Voestalpine Stahlwerk Donawitz	1.807.393	1.807.393	1.807.393	1.807.393	1.807.393	9.036.965
IVA066	Voestalpine Energiepark Donawitz	626.610	626.610	626.610	626.610	626.610	3.133.050
IVA236	Voestalpine Donawitz Kohleinblasung (new installation sec. 11/7)	77.813	77.813	77.813	77.813	77.813	389.065
IVA225	Voestalpine Donawitz other installations (not included in NAP I)	22.706	22.706	22.706	22.706	22.706	113.530
	Other Industries Sector	8.407.635	8.532.175	8.675.863	8.675.863	8.675.863	42.967.399
	Other Iron and Steel Industry	90.929	90.929	90.929	90.929	90.929	454.645
IES067	Böhler Stahlproduktion Kapfenberg	33.337	33.337	33.337	33.337	33.337	166.685
IES068	Böhler Verbrennungsanlage Kapfenberg	13.131	13.131	13.131	13.131	13.131	65.655

IES069	Breitenfeld Edelstahl Mitterdorf	14.063	14.063	14.063	14.063	14.063	70.315
IES070	Marienhütte Stahlwerk	30.398	30.398	30.398	30.398	30.398	151.990
	Cement Industry	2.729.033	2.751.529	2.774.025	2.774.025	2.774.025	13.802.637
IZE071	Schretter&Cie Zementwerk Vils	177.390	177.390	177.390	177.390	177.390	886.950
IZE072	Lafarge Perlmooser Mannersdorf	536.364	536.364	536.364	536.364	536.364	2.681.820
IZE073	Lafarge Perlmooser Retznei	293.107	293.107	293.107	293.107	293.107	1.465.535
IZE074	Zementwerk Hofmann Kirchdorf	231.583	231.583	231.583	231.583	231.583	1.157.915
IZE075	W&P Zementwerk Peggau	179.028	179.028	179.028	179.028	179.028	895.140
IZE076	W&P Zementwerk Wietersdorf	350.337	350.337	350.337	350.337	350.337	1.751.685
IZE238	W&P Zementwerk Wietersdorf (new installation sec. 11/7)	67.488	89.984	112.480	112.480	112.480	494.912
IZE077	Gmundner Zement	333.309	333.309	333.309	333.309	333.309	1.666.545
IZE078	Zementwerke Leube Gartenau	272.614	272.614	272.614	272.614	272.614	1.363.070
IZE246	Wopfinger Zement Waldegg_(new installation sec. 11/7)	54.543	54.543	54.543	54.543	54.543	272.715
IZE202	Wopfinger Zement Waldegg	233.270	233.270	233.270	233.270	233.270	1.166.350
	Paper Industry	2.146.238	2.146.238	2.267.430	2.267.430	2.267.430	11.094.766
IPA079	Trierenberg Papierfabrik Wattens	22.301	22.301	22.301	22.301	22.301	111.505
IPA080	SCA Ortmann	70.370	70.370	70.370	70.370	70.370	351.850
IPA081	Rondo Ganahl Frastanz	23.470	23.470	23.470	23.470	23.470	117.350
IPA082	Hamburger Papierfabrik Pitten	143.200	143.200	143.200	143.200	143.200	716.000
IPA083	Mondi Business Paper Hausmening	103.707	103.707	103.707	103.707	103.707	518.535
IPA084	Mondi Business Paper Kematen	38.946	38.946	38.946	38.946	38.946	194.730
IPA085	Ybbstaler Zellstoff Kematen	10.296	10.296	10.296	10.296	10.296	51.480
IPA086	Frantschach St. Gertraud	50.196	50.196	50.196	50.196	50.196	250.980
IPA087	Steyrermühl AG	235.856	235.856	235.856	235.856	235.856	1.179.280
IPA088	Sappi Gratkorn	383.459	383.459	383.459	383.459	383.459	1.917.295
IPA248	Sappi Gratkorn (new installation sec. 11/7)	105.397	105.397	105.397	105.397	105.397	526.985
IPA089	M-real Hallein	107.796	107.796	107.796	107.796	107.796	538.980
IPA090	Nettingsdorfer Ansfelden	92.042	92.042	92.042	92.042	92.042	460.210
IPA239	Nettingsdorfer Ansfelden (new installation sec. 11/7) ⁹						
IPA091	Norske Skog Bruck an der Mur	209.979	209.979	209.979	209.979	209.979	1.049.895
IPA092	Mayr-Melnhof Karton Frohnleiten	129.481	129.481	129.481	129.481	129.481	647.405
IPA250	Mayr-Melnhof Karton Frohnleiten Antrieb KM3 (new installation sec. 11/7) ⁹						
IPA249	Mayr-Melnhof Karton Frohnleiten Antrieb KM2 (new installation sec. 11/7) ⁹						
IPA093	Roman Bauernfeind Frohnleiten	43.569	43.569	43.569	43.569	43.569	217.845
IPA094	Brigl & Bergmeister Niklasdorf	2.967	2.967	2.967	2.967	2.967	14.835
IPA095	Mayr-Melnhof Karton Hirschwang	28.302	28.302	28.302	28.302	28.302	141.510
IPA096	Trierenberg Feurstein Traun	34.823	34.823	34.823	34.823	34.823	174.115
IPA097	Pappenfabrik Timmersdorf	0	0	0	0	0	0

IPA098	Merckens Schwertberg	4.258	4.258	4.258	4.258	4.258	21.290
IPA100	Paul Hartmann Grimmenstein	4.401	4.401	4.401	4.401	4.401	22.005
IPA101	SCA Laakirchen	2.586	2.586	4.827	4.827	4.827	19.653
IPA102	CMOÖ GuD Anlage Laakirchen	243.831	243.831	243.831	243.831	243.831	1.219.155
IPA240	CMOÖ GuD Laakirchen GT2 (new installation sec. 11/7)	0	0	115.196	115.196	115.196	345.588
IPA251	Zellstoff Pöls (new installation sec. 11/7)	7.481	7.481	11.236	11.236	11.236	48.670
IPA103	Zellstoff Pöls	47.524	47.524	47.524	47.524	47.524	237.620
	Chemical Industry	835.681	852.432	852.432	852.432	852.432	4.245.409
ICH104	Semperit Tech.Produkte Wimpassing	17.889	17.889	17.889	17.889	17.889	89.445
ICH105	Glanzstoff St. Pölten	60.346	60.346	60.346	60.346	60.346	301.730
ICH106	Sandoz Werk Kundl	74.886	74.886	74.886	74.886	74.886	374.430
ICH107	Jungbunzlauer Wulzeshofen	188.188	188.188	188.188	188.188	188.188	940.940
ICH241	Jungbunzlauer Wulzeshofen (new installation sec. 11/7)	5.584	22.335	22.335	22.335	22.335	94.924
ICH108	Dynea Krems	1.408	1.408	1.408	1.408	1.408	7.040
ICH109	Borealis Schwechat	14.798	14.798	14.798	14.798	14.798	73.990
ICH110	Solvay Ebensee	64.521	64.521	64.521	64.521	64.521	322.605
ICH112	DSM Fine Chemicals Austria Linz	31.421	31.421	31.421	31.421	31.421	157.105
ICH113	Isomax Wiener Neudorf	27.343	27.343	27.343	27.343	27.343	136.715
ICH114	AMI Agrolinz Melamine Linz	85.080	85.080	85.080	85.080	85.080	425.400
ICH242	AMI Agrolinz GuD Kraftwerk (new installation sec. 11/7) ⁹						
ICH115	EVN Baxter Krems	1.599	1.599	1.599	1.599	1.599	7.995
ICH116	Energie- und Medienzentrale Heiligenkreuz	62.900	62.900	62.900	62.900	62.900	314.500
ICH203	F.M. Hämmerle Dornbirn	9.981	9.981	9.981	9.981	9.981	49.905
ICH205	Kunert Rankweil	10.671	10.671	10.671	10.671	10.671	53.355
ICH117	Lenzing AG Zellstoff, Faser, Papier	179.066	179.066	179.066	179.066	179.066	895.330
	Lime Industry	807.448	892.741	892.741	892.741	892.741	4.378.412
IKA118	Ernstbrunner Kalktechnik	33.635	33.635	33.635	33.635	33.635	168.175
IKA119	Baumit Baustoffe Bad Ischl	43.171	43.171	43.171	43.171	43.171	215.855
IKA120	Voestalpine Kalkwerk Steyrling	325.873	325.873	325.873	325.873	325.873	1.629.365
IKA121	Wopfinger Baustoffindustrie Kalk	137.792	137.792	137.792	137.792	137.792	688.960
IKA122	W&P Kalkwerk Peggau	66.253	66.253	66.253	66.253	66.253	331.265
IKA243	W&P Kalkwerk Peggau (new installation sec. 11/7)	0	49.480	49.480	49.480	49.480	197.920
IKA123	Schretter&Cie Kalkwerk Vils	39.642	39.642	39.642	39.642	39.642	198.210
IKA208	Bernegger Moln Ofen 1 (new installation sec. 11/7)	19.514	24.947	24.947	24.947	24.947	119.302
IKA244	Bernegger Moln Ofen 2 (new installation sec. 11/7)	19.514	24.947	24.947	24.947	24.947	119.302
IKA245	Bernegger Moln Ofen 3 (new installation sec. 11/7)	0	24.947	24.947	24.947	24.947	99.788
IKA124	Leube Kalkwerk Tagger Golling	122.054	122.054	122.054	122.054	122.054	610.270

	Refractory Products	509.576	509.576	509.576	509.576	509.576	2.547.880
IFE125	Veitsch-Radex Radenthein	83.801	83.801	83.801	83.801	83.801	419.005
IFE126	Veitsch-Radex Hochfilzen	151.173	151.173	151.173	151.173	151.173	755.865
IFE127	Veitsch-Radex Trieben	23.651	23.651	23.651	23.651	23.651	118.255
IFE128	Veitsch-Radex Veitsch	15.986	15.986	15.986	15.986	15.986	79.930
IFE129	Rath Krummnußbaum	9.107	9.107	9.107	9.107	9.107	45.535
IFE130	Veitsch-Radex Breitenau	225.858	225.858	225.858	225.858	225.858	1.129.290
	Brick Industry	369.495	369.495	369.495	369.495	369.495	1.847.475
IZI131	Tondach Gleinstätten	25.492	25.492	25.492	25.492	25.492	127.460
IZI132	Wienerberger Hennersdorf	23.831	23.831	23.831	23.831	23.831	119.155
IZI133	Wienerberger Krengelbach Haiding	26.140	26.140	26.140	26.140	26.140	130.700
IZI134	Wienerberger Knittelfeld Apfelberg	8.894	8.894	8.894	8.894	8.894	44.470
IZI135	Tondach Unterprenstätten	8.351	8.351	8.351	8.351	8.351	41.755
IZI136	Wienerberger Fürstenfeld	10.189	10.189	10.189	10.189	10.189	50.945
IZI137	Herbert Pexider Teufenbach	11.693	11.693	11.693	11.693	11.693	58.465
IZI138	Wienerberger Göllersdorf	17.701	17.701	17.701	17.701	17.701	88.505
IZI139	Tondach Pinkafeld	16.283	16.283	16.283	16.283	16.283	81.415
IZI140	Wienerberger Helpfau Uttendorf	6.906	6.906	6.906	6.906	6.906	34.530
IZI141	Wienerberger Rotenturm	3.660	3.660	3.660	3.660	3.660	18.300
IZI142	Wienerberger Laa Thaya	17.313	17.313	17.313	17.313	17.313	86.565
IZI143	Ziegelwerk Eder Peuerbach Bruck	29.822	29.822	29.822	29.822	29.822	149.110
IZI144	Ziegelwerk Eder Weibern	21.858	21.858	21.858	21.858	21.858	109.290
IZI145	Ziegelwerk Pichler Wels	23.086	23.086	23.086	23.086	23.086	115.430
IZI147	Hilti Mettaufer Götzis	4.621	4.621	4.621	4.621	4.621	23.105
IZI148	Salzburger Ziegelwerk Oberndorf	9.929	9.929	9.929	9.929	9.929	49.645
IZI149	Leitl Spannton Eferding	21.299	21.299	21.299	21.299	21.299	106.495
IZI150	Ziegelwerk Martin Pichler Aschach	13.646	13.646	13.646	13.646	13.646	68.230
IZI151	Ziegelwerk Brenner Wirth St. Andrä	9.673	9.673	9.673	9.673	9.673	48.365
IZI152	Ziegelwerk Lizzi Erlach	1.605	1.605	1.605	1.605	1.605	8.025
IZI153	Ziegelwerk Obermair Neuhofen	1.643	1.643	1.643	1.643	1.643	8.215
IZI154	Ziegelwerk Nicoloso Pottenbrunn	985	985	985	985	985	4.925
IZI155	Ziegelwerk Danreiter Ried Innkreis	5.927	5.927	5.927	5.927	5.927	29.635
IZI156	Ziegelwerk Frixeder Senftenbach	13.556	13.556	13.556	13.556	13.556	67.780
IZI157	Comelli Ziegel Kirchbach Maxendorf	13.486	13.486	13.486	13.486	13.486	67.430
IZI158	Ziegelwerk Eberschwang	3.876	3.876	3.876	3.876	3.876	19.380
IZI201	Lias Fehring	9.860	9.860	9.860	9.860	9.860	49.300
IZI159	Ziegelwerk Rhomberg Dornbirn	5.292	5.292	5.292	5.292	5.292	26.460
IZI160	Ziegelwerk Weindl Steyr	2.878	2.878	2.878	2.878	2.878	14.390
	Food Industry	385.849	385.849	385.849	385.849	385.849	1.929.245
ILE161	Agrana Tulln	87.081	87.081	87.081	87.081	87.081	435.405
ILE162	Agrana Hohenau	0	0	0	0	0	0

ILE163	Agrana Leopoldsdorf	77.133	77.133	77.133	77.133	77.133	385.665
ILE164	OÖ Tierkörperverwertung Regau	801	801	801	801	801	4.005
ILE165	Agrana Aschach	74.854	74.854	74.854	74.854	74.854	374.270
ILE166	Agrana Gmünd	33.837	33.837	33.837	33.837	33.837	169.185
ILE167	Rauch Nüziders	12.024	12.024	12.024	12.024	12.024	60.120
ILE168	EVN COGEN Agrana Tulln	27.610	27.610	27.610	27.610	27.610	138.050
ILE170	Brau Union Göss Leoben	2.529	2.529	2.529	2.529	2.529	12.645
ILE171	Brau Union Puntigam Graz	4.728	4.728	4.728	4.728	4.728	23.640
ILE211	Bioethanolanlage Pischelsdorf (new installation sec. 11/7)	65.252	65.252	65.252	65.252	65.252	326.260
	Glass Industry	211.580	211.580	211.580	211.580	211.580	1.057.900
IGL172	Vetropack Kremsmünster	63.496	63.496	63.496	63.496	63.496	317.480
IGL173	Vetropack Pöchlarn	49.161	49.161	49.161	49.161	49.161	245.805
IGL174	Technoglas Voitsberg	6.489	6.489	6.489	6.489	6.489	32.445
IGL175	Inn Crystal Glass Braunau	3.171	3.171	3.171	3.171	3.171	15.855
IGL176	Stölzle-Oberglas Köflach	40.242	40.242	40.242	40.242	40.242	201.210
IGL179	Swarovski Wattens	32.166	32.166	32.166	32.166	32.166	160.830
IGL252	Swarovski Wattens (new installation sec. 11/7)	6.961	6.961	6.961	6.961	6.961	34.805
IGL181	Saint-Gobain Isover Austria	9.894	9.894	9.894	9.894	9.894	49.470
	Wood Industry	234.184	234.184	234.184	234.184	234.184	1.170.920
IHO182	Funder Werk 1 St. Veit Glan	43.015	43.015	43.015	43.015	43.015	215.075
IHO184	Fritz Egger St. Johann Tirol	23.983	23.983	23.983	23.983	23.983	119.915
IHO185	Fritz Egger Wörgl	20.024	20.024	20.024	20.024	20.024	100.120
IHO186	Fritz Egger Unterradlberg	13.785	13.785	13.785	13.785	13.785	68.925
IHO187	Fritz Egger Novopan Nachf. Leoben	13.237	13.237	13.237	13.237	13.237	66.185
IHO188	Umdasch Amstetten	3.381	3.381	3.381	3.381	3.381	16.905
IHO189	Funder Neudörfel	20.791	20.791	20.791	20.791	20.791	103.955
IHO190	Wiesner-Hager Altheim	696	696	696	696	696	3.480
IHO191	Binder MDF Hallein	4.520	4.520	4.520	4.520	4.520	22.600
IHO192	Kaindl Holzindustrie Wals	90.752	90.752	90.752	90.752	90.752	453.760
	Machine construction, steel and automotive industry	87.622	87.622	87.622	87.622	87.622	438.110
IMS193	AMAG Service Ranshofen	9.149	9.149	9.149	9.149	9.149	45.745
IMS196	BMW Motoren Steyr	17.632	17.632	17.632	17.632	17.632	88.160
IMS197	Magna Steyr Werk 1 Graz	13.826	13.826	13.826	13.826	13.826	69.130
IMS198	Magna Steyr Werk 2 Graz	12.096	12.096	12.096	12.096	12.096	60.480
IMS199	Teich AG Weinburg	10.868	10.868	10.868	10.868	10.868	54.340
IMS200	Energie-Contracting Steyr	24.051	24.051	24.051	24.051	24.051	120.255
	TOTAL	29.800.689	29.791.121	30.173.750	30.173.750	30.173.750	150.113.060

8.2 Survey of base-period emission data

In order to determine the historical emission data in the base period, a data survey has been carried out by the Federal Environment Agency, covering the emissions from 2002 to 2005 declared by the relevant installations in accordance with Sec. 12a EZG.

At the time of preparation of the present allocation plan, the data was available in form of the final report (data as of June 2006). Minor differences of emission values in comparison to the base period emissions (2002-2005) indicated in table 6 result from installations which meanwhile have been closed down and therefore need not be taken into account in the NAP.

Table 8: Total CO₂ emissions (relevant for EZG) according to operators' declarations for 2002 to 2005 by attribution to NAP codes, data as of 12/07/2006, data in million t/annum

Sub-sector	Code	CO ₂ emissions (relevant for EZG), million				
		2002	2003	2004	2005	avg. 2002-2005
Power generation c)	EEW	9.117	11.736	11.043	10.983	10.720
District heating a)	EFE	0.554	0.564	0.553	0.551	0.556
Mineral oil processing	EMV	2.610	2.733	2.891	2.870	2.776
Voestalpine b)	IVA	10.035	10.011	10.212	11.161	10.355
Other iron and steel industry	IES	0.062	0.071	0.079	0.081	0.073
Cement industry a)	IZE	2.690	2.712	2.707	2.681	2.698
Paper industry	IPA	2.113	2.132	2.109	2.155	2.127
Lime industry	IKA	0.704	0.739	0.768	0.747	0.740
Brick industry a)	IZI	0.333	0.338	0.362	0.360	0.348
Glass industry	IGL	0.189	0.202	0.200	0.200	0.198
Chemical industry d)	ICH	0.917	0.926	0.854	0.798	0.874
Textile industry e)	ITE					
Refractory products	IFE	0.494	0.501	0.538	0.522	0.513
Food industry	ILE	0.337	0.320	0.336	0.349	0.335
Wood industry	IHO	0.202	0.202	0.211	0.220	0.209
Machine construction, steel and automotive industry	IMS	0.069	0.082	0.088	0.086	0.081
Total		30.426	33.269	32.950	33.765	32.602

Notes on table:

a) the installation classification has been slightly modified from NAP-1 (incl. installations assigned to NAP-1 code ISA)

b) due to the notes of the NAP Guidance Paper of the EU Commission of 22/12/2005, combustion processes involving integrated steelworks have been included in the survey. The data listed here already includes these installations.

c) includes installations closed down during the base period

d) one opt-in application for voluntary participation in the emissions trading scheme has been received. The relevant emissions are not included in this table.

8.3 Climate strategy 2002/2007

The 2002 climate strategy has been amended in 2007. The document is made available to the public via webpage www.klimastrategie.at.

Projection and target scenario for 2010

On the basis of a business as usual scenario and taking into consideration the reduction potentials of non-ETS sectors according to the Climate Strategy evaluation report and climate change mitigation contributions within the ETS, the amendment of Climate Strategy 2007 sets new sectoral targets for 2010.

Table 9: Sectoral emissions 1990, projection 2010 (BaU) and target values 2010

Sector	1990	Projection BaU for 2010 ¹⁰	Projection BaU 2008-2012 for ETS ¹¹	Climate Strategy 2007 – new target value for 2010
	<i>in mill tons CO₂-equiv. (6 gases)</i>			
Heating and other small consumption	14,9	14,3	-	11,9
Energy Transformation (electricity and heat production, refinery)	13,7	16,7	15,71	12,95
Waste management	3,6	2,8	-	2,1
Transport	12,8	21,6	-	18,9
Manufacturing industry and industrial processes	22,3	25,0	22,45	23,25
F-gases	1,6	1,4	-	1,4
Other CO ₂ -, CH ₄ - und N ₂ O-emissions (e.g. solvents)	1,0	0,9	-	0,9
Agriculture (N ₂ O+CH ₄)	9,1	7,3	-	7,1
Land-use, land-use change and forestry				-0,712
total	79,0	89,9	38,16	77,8
Contribution JI/CDM				-9,0
Kyoto target value				68,8

The business as usual scenario given in table 8 reflects the latest emission projection of the Federal Environment Agency (EMIPRO, 2005), which, for energy related emissions, is based on a baseline energy scenario of the Economic Research Institute (WIFO 2005). Within sectors energy transformation and industry, trend scenarios 2008-2012 for installations covered by the EU ETS where taken into account as well (WIFO/KWI 2006).

¹⁰ EMIPRO (Federal Environment Agency 2005)

¹¹ according to trend scenarios for the second National Allocation Plan NAP II (WIFO/KWI 2006)

¹² Vorläufige Schätzung des Umweltbundesamtes über Senkenpotential der Art.3.3 KP-Aktivitäten

8.4 Evaluation of the economic potential of installations: determination of the growth factor through trend analyses by WIFO/KWI

Within the framework of drawing up the National Allocation Plan, WIFO (www.wifo.at) and consultancy KWI (www.kwi.at) conducted a study of the future evolution of production and the resulting CO₂ emissions of the relevant sub-sectors. This study was commissioned by the BMLFUW, the BMWA, the IV and the WKO in cooperation with the relevant sub-sectors. The summary and description of methodology below are direct excerpts from the study "Zweiter Nationaler Allokationsplan des EU-Emissionshandelssystems: Fundierung der Entscheidungsgrundlagen für Österreich" ("Second National Allocation Plan of the EU Emissions Trading Scheme: Foundation for the Decisions in Austria", WIFO/KWI, July 2006):

Summary of Results

The research project serves foundation for decisions leading to the Second National Allocation Plan (NAP-2) for Austria in the EU Emissions Trading Scheme (EU ETS) by providing the following results:

- A Business As Usual forecast of the CO₂ emissions anticipated for the second trading period 2008 to 2012.
- An estimate of the emissions anticipated for the first trading period 2005 to 2007 compared to the actual allocation for this period.
- A comparison of actual emissions of 2005 with the emission allowances allocated under NAP-1.

Figure 4 gives information on the Business As Usual forecasts for CO₂ emissions drawn up on the basis of the projected development of production and technologies. Time series data of the CO₂ emissions and total real gross domestic product (GDP), added for reference, and the commodity production share of GDP is shown as index series taking 1990 as their base year. In addition, the figure shows the number of emission allowances allocated in the first allocation period.

Figure 4: NAP-2 forecasts 2006 – 2012 in comparison to GDP

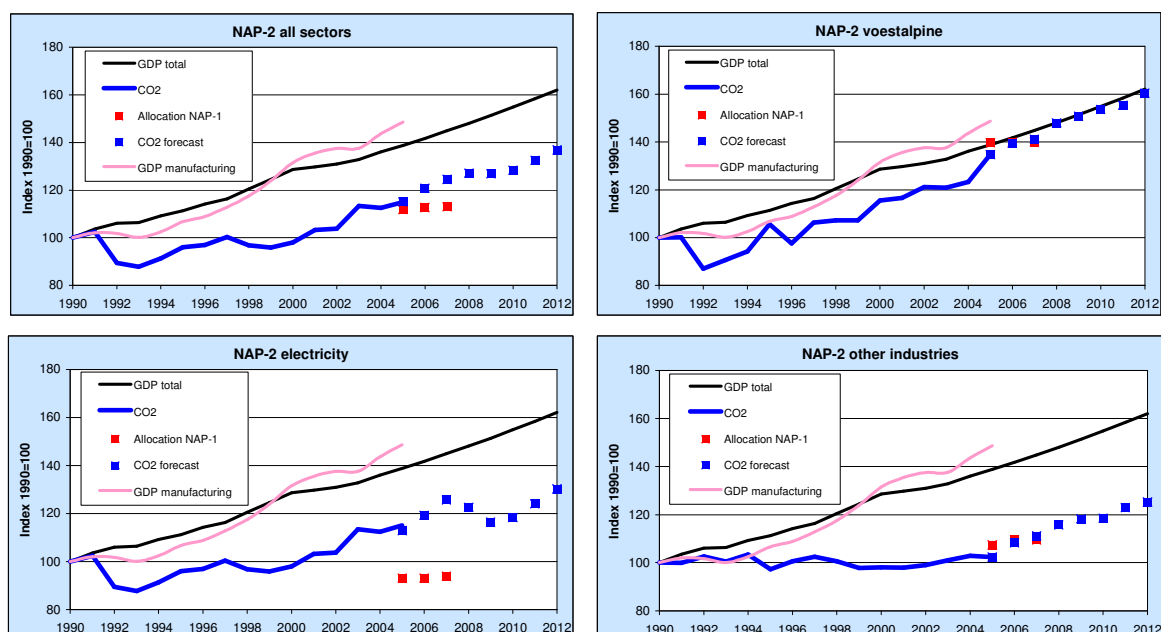


Table 10 shows the BaU forecasts for each sector compared to the actual CO₂ emission values 2005 and the allocations for that year.

Table 10: BaU forecast 2008 – 2012

CO ₂ emissions Tons	Forecast Average 2008/12 ¹	Forecast without § 11 (7) and additional installations	Additional installations in NAP-2	§ 11 (7) installations	Verified emissions 2005	Allocation 2005	Difference 2008/12 over verified 2005 data		Difference 2008/12 over allocation 2005	
							Percent	Tons	Percent	Tons
Total BAU NAP-2	38.302.486	24.381.816	386.152	1.646.476	33.677.228	32.414.872	13,7	4.625.258	18,2	5.501.462
Energy	15.705.423	3.617.781		258.600	14.326.535	12.376.490	9,6	1.378.888	26,9	3.328.933
Electricity ¹	11.829.042				10.919.045	9.004.499	8,3	909.997	31,4	2.824.543
District heating	620.920	620.920			537.575	604.666	15,5	83.345	2,7	16.254
Mineral oil industry	3.255.461	2.996.861		258.600	2.869.915	2.767.325	13,4	385.546	17,6	488.136
Industry	22.597.063	20.764.035	386.152	1.387.876	19.350.693	20.038.382	16,8	3.246.370	12,8	2.558.681
voestalpine	12.729.093	11.776.473	386.152	566.468	11.163.702	11.244.987	14,0	1.565.391	13,2	1.484.106
Other industries	9.867.970	8.987.562		821.408	8.186.991	8.793.395	20,5	1.680.979	12,2	1.074.575
voestalpine	12.729.093	11.776.473	386.152	566.468	11.163.702	11.244.987	14,0	1.565.391	13,2	1.484.106
Electricity ¹	11.829.042				10.919.045	9.004.499	8,3	909.997	31,4	2.824.543
Mineral oil industry	3.255.461	2.996.861		258.600	2.869.915	2.767.325	13,4	385.546	17,6	488.136
Cement	3.106.727	2.998.167		108.560	2.681.277	2.755.179	15,9	425.450	12,8	351.548
Paper	2.462.466	2.129.084		333.382	2.154.479	2.254.311	14,3	307.987	9,2	208.155
Lime	982.517	849.776		132.741	747.385	821.579	31,5	235.132	19,6	160.938
District heating	620.920	620.920			537.575	604.666	15,5	83.345	2,7	16.254
Refractories	580.535	580.535			533.140	581.347	8,9	47.395	-0,1	-812
Bricks	406.450	406.450			344.601	347.000	17,9	61.849	17,1	59.450
Glass	242.921	242.921			215.812	215.476	12,6	27.109	12,7	27.445
Other iron and steel	103.217	103.217			80.849	68.399	27,7	22.368	50,9	34.818
Others	1.924.137	1.677.412		246.725	1.429.448	1.750.104	34,6	247.964	9,9	174.033

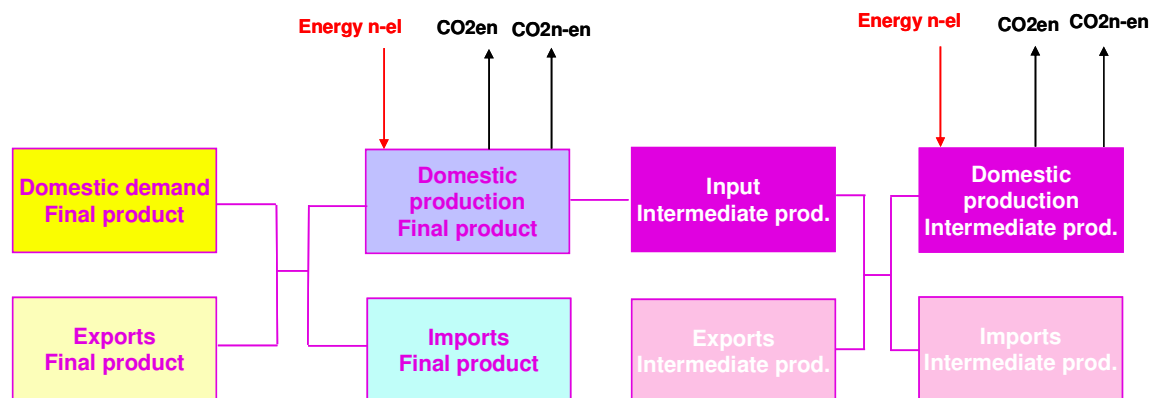
¹ For the electricity sector new installations and installation upgrades (§11 (7)) are included in the forecast. Because of the applied methodology a distinction between existing installations and new installations is not possible.

The negligible deviations with regard to the BAU values used in the allocation plan (see also table 6, p. 19) for district heating, brick and "other sub-sectors" are caused by the differing classification of single installations.

Forecasting method

The following method was used to forecast the Business As Usual values for each sub-sector in the second allocation period 2008 to 2012:

- The CO₂ emissions to be expected are broken down into a production component and two technology components.
- These three components are extrapolated on the basis of the information available for the forecast period.

Figure 5: Structure of the relevant market**Model of segmentation into components**

The basic structure of the CO₂ emissions depicted in three components is based on the following data:

Q	Production
E	Energy input (non-electrical)
C _e	Energetic CO ₂ emissions
C _p	Process-driven CO ₂ emissions

The following technology parameters have been determined based on the above data:

$e \equiv E/Q$	Non-electrical energy intensity
$c_e \equiv C_e/E$	Energetic CO ₂ intensity
$c_p \equiv C_p/Q$	Process-driven CO ₂ intensity

Now the volume of CO₂ emissions can be shown with the following component segmentation:

$$C = Q \cdot e \cdot c_e + Q \cdot c_p$$

i.e. the volume of CO₂ emissions is determined by multiplication of production, energy intensity, as well as energetic CO₂ intensity and process-driven CO₂ intensity.

Determination of production, energy and CO₂ intensities

For the purpose of determining production, the market structure of the relevant sub-sector is analysed.

Based on the forecasts for domestic demand and cross-border deliveries via exports and imports, the sub-sector's required production volume is calculated. In some cases, the production process is extended to include intermediate products.

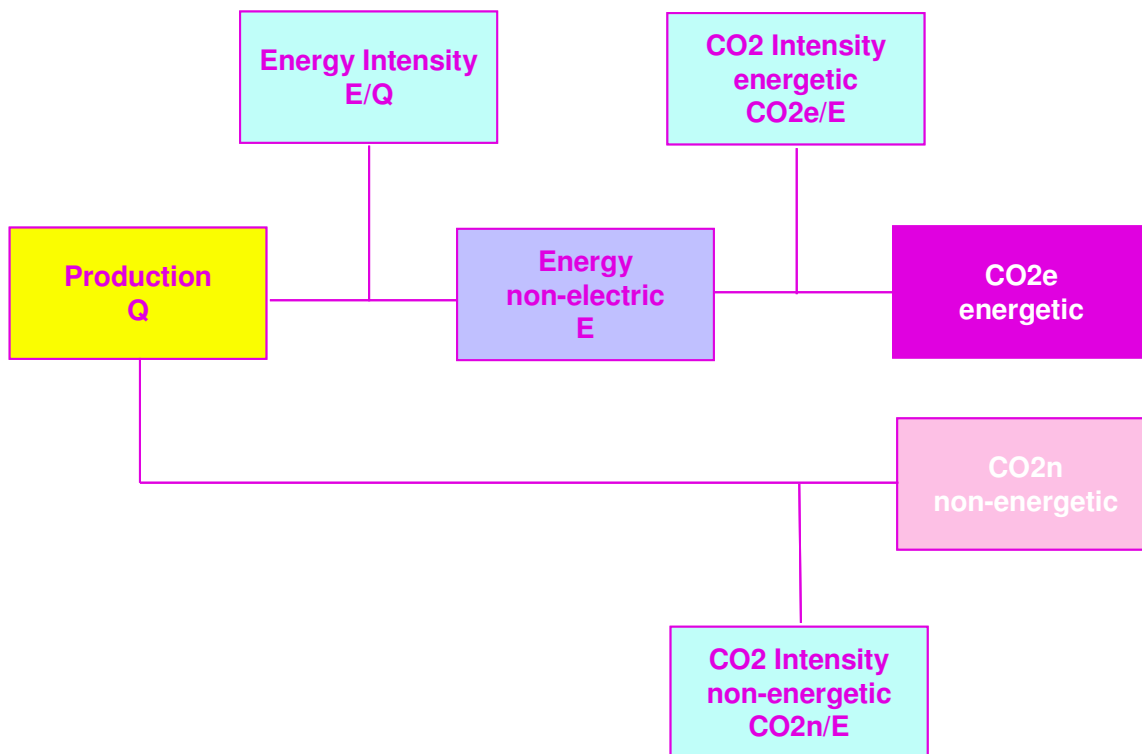
For both the final and intermediate product, the non-electrical energy quantities and process-driven CO₂ emissions are depicted.

Forecasts for market development and technologies

To forecast the evolution of demand and supply, domestic GDP values are used as far as possible and foreign GDP values as far as necessary, as indicators of the evolution of the whole economy. The GDP values used are those of the current WIFO forecasts.

To forecast the energy intensity and CO₂ intensity technology parameters, the historical evolution, information on planned investments and international comparisons are used.

Figure 6: Structure of the component decomposition model for CO₂ emissions



Statistical methods

The statistical methods used include

- univariate forecasts, i.e. the projection of a component based on past information (e.g. the energy intensity) and
- bivariate forecasts, i.e. the projection of a component based on its relationship to another component (e.g. domestic demand in relation to GDP).
- Moreover, sequential estimation procedures that can evaluate the relevance of the available past information for the future are used.

Rates of change of market parameters are typically used for market forecasts.

The univariate forecasts for a variable (y), based on two models that differ from each other in that a time-based trend component is included:

$$y_t = u_t$$

$$y_t = a \cdot t + u_t$$

Here, u contains an unobserved error variable, t is a time index and a is the trend parameter to be estimated.

The bivariate forecasts for variable y by another variable x is shown by:

$$y_t = b \cdot x_t + u_t$$

If the variables y and x are data transformed into rates of change, then the b parameter describes the elasticity between the two variables.

Whenever a parameter needs to be estimated from past data, the following sequential estimation procedure is applied:

$$z_{t|t-1} = z_{t-1|t-2} + g \cdot (z_{t-1} - z_{t-1|t-2})$$

The estimation procedure can be adapted to the data by way of the smoothing factor g , so that errors of estimation are minimised. This estimation procedure has proven particularly adequate for structural changes in past data.

8.5 Evaluation of the technical reduction potential of installations: the potential factor

The potential factor of the allocation formula (installations and sub-sectors) takes into account the potential to reduce emissions in accordance with Annex III of the Emissions Trading Directive.

8.5.1 General method used to determine the potential factor

The general method used to determine the potential factor in order to take into account the reduction potential, as described in this sub-section, is valid for all sectors except for the electricity sector (cf. 8.5.2). The potential factor includes the following parameters:

- *Process emissions*: emissions generated by a process are assigned a potential factor of 1.0 (i.e. no reduction). Emissions from thermal oxidisers (TO) are treated as process emissions.
- *Combustion emissions*: the higher the CO₂ intensity of the fuel used (in t CO₂/TJ), the higher the standard reduction potential. A CO₂ emission factor of 110 will exhibit a potential factor of 0.8 (this corresponds to a reduction of 20%); an emission factor of 55.4 (natural gas) will exhibit a potential factor of 0.96 (-4%). Linear interpolation is applied between each of the values. The fuel potential factor (not including the CHP/waste heat bonus or BAT penalty) is 1.0 at most and not less than 0.75, in order to take into account competition from countries and/or installations outside the European Union.
- *CHP bonus*: if an installation is entitled to a CHP bonus, the required reduction for the proportional emissions (corresponding to the CO₂ emissions of the fuels used) is lowered by 4 percentage points, i.e. for natural gas, the PF for bonus-entitled emissions is 1.0 instead of 0.96. The part entitled to the bonus is the proportion of emissions attributed to combined heat and power generation during the base period, if a primary energy savings of at least 10% compared to the separate generation of power and heat has been realised. When taking into account the CHP bonus, the potential factor amounts to a maximum of 1.04.
- *Waste heat bonus*: where an installation supplies a public district heating network with waste heat, the required reduction for the proportional emissions (equivalent to the CO₂ intensity of the fuels used) is lowered by 4 percentage points, i.e. if natural gas is used, the PF for emissions for which a bonus can be granted is 1.0 rather than 0.96. To determine the emissions for which a bonus can be granted, it is assumed that the extracted heat was produced by an alternative means using natural gas. When taking into account the CHP bonus, the potential factor amounts to a maximum of 1.04.
- *BAT penalty*: if the BAT penalty is applied to an installation (i.e. it does not comply with BAT = *best available technique*), the required reduction is increased by 4 percentage points, i.e. the PF is 0.92 instead of 0.96 if natural gas is used.

Sample calculations

1. Differentiation by fuel use:

Underlying the pre-determined parameters, which specify that a fuel with a CO₂ intensity of 55.4 (= natural gas) requires a reduction of 4% (potential factor of 0.96) and a CO₂ intensity of 110 requires a reduction of 20% (potential factor of 0.8) is a straight line, expressed in the following function:

$$y = k \cdot x + d$$

k = gradient = - 0.00293040

d = distance to origin = 1.122344322

x = CO₂ intensity of the fuel used (t CO₂/TJ)

Example 1 – Installation without "bonus":

Combustion installation fired by heating oil (no CHP): average historic emissions 2002-2005 (allocation base) = 10,000 t CO₂, CO₂ intensity: 78 t CO₂/TJ

Calculation:

Potential factor = $-0.00293040 * 78 + 1.122344322 = 0.89377$

Potential of installation: $10,000 * 0.89377 = 8,938 \text{ t CO}_2$

2. CHP bonus

The share of emissions accounted for by the generation of combined heat and power is assigned the CHP bonus if primary energy of at least 10% can be saved in comparison to what would have been needed if heat and electricity had been generated separately. The CHP bonus increases the standard potential factor by 4 percentage points.

Example 2 – Installation with CHP bonus:

CHP installation fuelled by natural gas: average historic emissions 2002-2005 (allocation base) = 10,000 t CO₂, CHP share (basis for calculation of CHP bonus) = 8,000 t CO₂, basis for calculation without CHP bonus: 2,000 t CO₂, CO₂ intensity: 55.4 t CO₂/TJ

Calculation:

Potential factor without CHP bonus = $-0.00293040 * 55.4 + 1.122344322 = 0.96$

(PF of 0.96 is to be applied to 2,000 t CO₂)

Potential factor with CHP bonus: = $0.96 + 0.04 = 1.0$

(PF of 1.0 is to be applied to 8,000 t CO₂)

Potential factor of installation weighted by emission shares:

PF = $(0.96 * 0.2) + (1.0 * 0.8) = 0.992$

Potential of installation:

$10,000 * 0.992 = 9,920 \text{ t CO}_2$

3. Waste heat bonus:

Installations that contribute waste heat to a public district heating network although they serve a different purpose (e.g. industrial processes, condensing electricity) are assigned the waste-heat bonus, and for the purpose of determining the assessment basis it is assumed that the heat injected into the network would have been produced by alternative means using natural gas. The waste-heat bonus raises the standard potential factor by 4 percentage points.

Example 3 – Installation with waste-heat bonus:

Industrial installation fuelled by heating oil, average historic emissions 2002-2005 (allocation base) = 10,000 t CO₂, CO₂ intensity: 78 t CO₂/TJ, waste heat extraction: 7,000 MWh/a, CO₂ emissions under the assumption of alternative production with natural gas: $7,000 * 0.198 = 1,368 \text{ t CO}_2$, basis for calculation of waste-heat bonus = 1,368 t CO₂, basis for calculation of other emissions = $10,000 - 1,368 = 8,632 \text{ t CO}_2$

Calculation:

Potential factor without waste-heat bonus = $-0.00293040 * 78 + 1.122344322 = 0.89377$

(PF of 0.89377 is to be applied to 8,632 t CO₂)

Potential factor with waste-heat bonus: = $0.89377 + 0.04 = 0.93377$

(PF of 0.93377 is to be applied to 1,368 t CO₂)

Potential factor of installation weighted by emission shares:

PF = $(0.89377 * 0.8632) + (0.93377 * 0.1368) = 0.89924$

Potential of installation:

$10,000 * 0.89924 = 8,992 \text{ t CO}_2$

4. Process emissions

A potential factor of 1.0 is applied to the process share of an installation's overall emissions.

Example 4 – Installation with combustion and process emissions

Average historic emissions 2002-2005 (allocation base) = 10,000 t CO₂, combustion share: 2,000 t CO₂, process share: 8,000 t CO₂, CO₂ intensity of fuel used: 95 t CO₂/TJ

Calculation:

Potential factor/combustion = $-0.00293040 * 95 + 1.122344322 = 0.84396$
(PF of 0.84396 is to be applied to 2,000 t CO₂)

Potential factor/process = 1.0
(PF of 1.0 is to be applied to 8,000 t CO₂)

Potential factor of installation weighted by emission shares:
PF = $(0.84396 * 0.2) + (1.0 * 0.8) = 0.96879$

Potential of installation:
 $10,000 * 0.96879 = 9,688 \text{ t CO}_2$

5. Biomass-CHP installation with fossil fuel co-firing

The differentiation of the potential factor by CO₂ intensity (as explained under heading 1) leads to a (theoretical) potential factor of 1.12 for installations with 100% biomass use, because the CO₂ intensity figure for biomass used in the calculation is 0. However, a ceiling of 1.0 is set for the potential factor (1.04 for CHP emissions).

Example 5 – Biomass-CHP installation with fossil fuel co-firing

Average historic emissions 2002-2005 (allocation base) = 10,000 t CO₂/fossil, CHP share (basis for calculation for CHP bonus) = 8,000 t CO₂, basis for calculations without CHP bonus: 2,000 t CO₂, CO₂ intensity: 20 t CO₂/TJ (e.g. natural gas and biomass mix)

Calculation:

Potential factor without CHP bonus = $-0.00293040 * 20 + 1.122344322 = 1.06374 \Rightarrow 1.0$
(PF of 1.0 is to be applied to 8,000 t CO₂)

Potential factor with CHP bonus: = $1.0 + 0.04 = 1.04$
(PF of 1,04 is to be applied to 8,000 t CO₂)

Potential factor of installation weighted by emission shares:
PF = $(1.0 * 0.2) + (1.04 * 0.8) = 1.032$

Potential of installation:
 $10,000 * 1.032 = 10,320 \text{ t CO}_2/\text{fossil}$

8.5.2 Benchmarking in the electricity generation sector

Deviating from the method described above to calculate the potential factor, a *benchmarking* approach was chosen for the electricity generation sector, following the recommendations of the European Commission. This approach provides for the use of different benchmarks - expressed in tons of CO₂/GWh - for net electricity and net heat generation in installations of the electricity generation sector. On the electricity side, the benchmark is 350 t CO₂/GWh, on the heat side 175 t CO₂/GWh (oriented at the use of natural gas). The production data of each installation determined in the base period 2002-2005 form the basis for calculating the CO₂ emissions that correspond to the benchmarks. The potential factor for each installation expresses the difference between historic emission values (2002-2005) and the emission values based on the benchmarks.

Upper and lower limits are defined for the potential factor (0.65/1.05).

Example 6 – Power plant benchmarking

The average emission value of a power plant in the base period 2002-2005 is 500,000 t CO₂ p.a. Average net electricity generation p.a. was 1,000 GWh, while net heat generation was 600 GWh.

Calculation:

Emissions using benchmarks = (1,000 * 350) + (600 * 175) = 455,000 t CO₂

This results in the following PF:

455,000 / 500,000 = 0.91

8.6 Criteria for the preparation of the National Allocation Plan in the Emission Allowance Trading Act

Directive 2003/87/EC of the European Parliament and the Council establishing a scheme for greenhouse gas emission allowance trading within the Community is transposed into Austrian law by way of the Emission Allowance Trading Act (EZG).

Sections 11-13 EZG (see below for the consolidated text of the amendment enacted by Federal Law Gazette I No. 171/2006, entered into force on 29 December 2006) define the parameters for the preparation of the National Allocation Plan and the legal acts based thereon, as well as the criteria for the allocation of allowances in the 2008-2012 period:

Allocation of Emission Allowances

National Allocation Plan as basis for decision-making (planning document)

Section 11. *The Federal Minister of Agriculture, Forestry, Environment and Water Management, the Federal Minister of Economics and Labour and the Federal Minister of Finance shall jointly and in an objective and transparent manner draw up a National Plan for the 2005 to 2007 period and as of 2008 for every subsequent five-year period to serve as a decision-making basis for allocation in accordance with Sec. 13. This national plan shall state the total quantity of emission allowances for the period, the ratio of this quantity to the emissions from all other sectors, the allocation of emission allowances to the installation owners with reference to installations engaged in an activity listed in Annex 1 or in an ordinance pursuant to Sec. 2 (2), or included in the allocation plan in accordance with Sec. 2 (3), as well as the percentage of emission allowances intended for auctioning. When preparing the allocation plan, the criteria of Sec. 13 (2) shall apply correspondingly.*

(2) *[obsolete by virtue of Federal Law Gazette I No. 171/2006]*

(3) *[obsolete by virtue of Federal Law Gazette I No. 171/2006]*

(4) *The National Allocation Plan shall provide for a reserve quota for new entrants in accordance with Sec. 3 (5). At least 1% of the total quantity of emission allowances shall be kept in reserve. The allocation plan shall provide for at least a deadline after which the emission allowances remaining in reserve are sold on the market.*

(5) *The plan may contain information on how competition with countries or installations outside the European Union are taken into account.*

(6) *The National Allocation Plan shall include a list of installations to which this Federal Law applies, detailing the number of emission allowances envisaged for each installation.*

(7) *All installations in accordance with Annex 1 or an ordinance in accordance with Sec. 2 (2), as well as installations included in the allocation plan in accordance with Sec. 2 (3), which have been authorised pursuant to the laws relevant for installations in a first instance at the latest one week before the deadline for submission of the allocation plan to the European Commission pursuant to Sec. 13 (3), shall be considered in the National Allocation Plan for the period 2005 to 2007. For the subsequent periods, all installations that have demonstrably made a full application for approval pursuant to the laws relevant for installations three months before the allocation plan is submitted to the European Commission in accordance with Sec. 13 (3), and which are expected to be put into operation before the last day of the current period, shall be considered in the allocation plan. The allocation plan shall specify that emission allowances are allocated to these installations on condition that the installations are actually put into operation. Where it is impossible to determine with sufficient accuracy the emissions generated by the operation of an installation for which an application for approval under the laws relevant for installations has been made at the latest 21 months before the commencement of the subsequent period,*

i.e. on or before 31 March 2006 for the 2008 to 2012 period and on or before 31 March 2011 for the 2013 to 2017 period, the decision may be taken not to include that installation in the allocation plan. In particular, it is impossible to determine the emissions with sufficient accuracy if the duration of the approval procedure, and thus the date the installation is put into operation, cannot be estimated. In every case the following factors shall be taken into account in the allocation of allowances to installations for which declarations of emissions have either not been made, or these declarations are incomplete or insufficient, in particular for installations that have been put into operation during or after the relevant base period:

- a) the authorised capacity of the installation,*
- b) the average capacity utilisation observed, on average, in installations of the relevant sub-sector,*
- c) the anticipated capacity utilisation during the period and*
- d) the anticipated emissions of the installation under the assumption that the latest technology is used.*

(8) The National Allocation Plan for periods as of 2008 shall lay down to what extent the project-related mechanisms of the Kyoto Protocol shall be used for the fulfilment of the Austrian commitment under the Kyoto Protocol, in accordance with par. 1, in the relevant period. The National Allocation Plan shall also define the percentage of allocations to the installations, or, where Sec. 18 (2) applies, the actual emissions, up to which the installation operators may use the certified emission reductions pursuant to Sec. 3 line 7 and emission reduction units in accordance with Sec. 3 line 8 to fulfil their commitment pursuant to Sec. 18. The percentage shall conform with the complementary commitments of the Republic of Austria under the Kyoto Protocol and the Decisions that have been reached on the basis of the framework agreement of the United Nations on climate change and the Kyoto Protocol, in particular Decision 15/CP.7.

(9) When drawing up the National Allocation Plan, the preliminary draft of the plan shall in any event be sent to the owners of the affected installations and the federal ministers whose area of competence has been affected by this matter. The owners shall be given an opportunity of no less than six weeks to make a statement.

(10) The revised draft plan, which will take into account the statements received in accordance with subsection 9, shall be made available to the general public and the persons or authorities listed in subsection 9 as well as the owners' representatives, and a six-week period for making statements shall be fixed. The revised plan, which will take into account the received statements, shall be published upon completion of these consultations and be submitted to the European Commission and the other Member States.

First National Allocation Plan

Section 12. ...

Second National Allocation Plan

Section 12a. *When preparing the National Allocation Plan for the 2008 to 2012 period, the Federal Minister of Agriculture, Forestry, Environment and Water Management shall take into account the emissions of installations in accordance with Annex 1 or Sec. 2 (3) of the period 2002 to 2005, as declared by the installation owners and checked for plausibility by the Federal Minister of Agriculture, Forestry, Environment and Water Management. If no such declarations have been made, the Federal Minister of Agriculture and Forestry, Environment and Water management shall order the installation owner by official notification to make a declaration. If the base period 2002 to 2005 is not representative for the installation, a different base period can be used in substantiated cases, where single years are excluded from the period. Notwithstanding Sec. 8, a report on emissions for the year 2005 which has not been audited in accordance with Sec. 9 shall be submitted to the Federal Minister of Agriculture, Forestry, Environment and Water Management before 15 February 2006.*

Allocation of emission allowances by ordinance and official notification

Section 13 (1) *For the 2008 to 2012 period, the Federal Minister of Agriculture, Forestry, Environment and Water Management and the Federal Minister of Economics and Labour shall jointly determine six months before the commencement of the period and twelve months before the commencement of every subsequent five-year period*

- 1. the total quantity of emission allowances to be allocated over the relevant period,*
- 2. the reserve quota and deadline after which the remaining emission allowances are sold on the market (subsection 5),*
- 3. the percentage of allocation up to which the installation owners may use certified emission reductions and emission reduction units to discharge their duty in accordance with Sec. 18, and*
- 4. the allocation of emission allowances to the various installations by allocation ordinance.*

The allocation ordinance shall be issued for all installations that have demonstrably made a full application for approval on the basis of the laws relevant for installations at the latest 21 months before the start of the following period, i.e. 31 March 2006 for the 2008 to 2012 period and 31 March 2011 for the 2013 to 2017 period, that are scheduled to start operation before the last day of the relevant period and the emissions of which can be determined with sufficient accuracy. The allocation ordinance shall state that the emission allowances are allocated to these installations on condition that the

installations are actually put into operation. Where it is impossible to determine with sufficient accuracy the emissions generated by the operation of an installation for which an application for approval under the laws relevant for installations has been made at the latest 21 months before the start of the subsequent period, the decision may be taken not to include that installation in the ordinance. In particular, it is impossible to determine the emissions with sufficient accuracy if the duration of the approval procedure, and thus the date the installation is put in operation, cannot be estimated. In every case the following factors shall be taken into account in the allocation of allowances to installations for which declarations of emissions have either not been made, or these declarations are incomplete or insufficient, in particular for installations that have been put into operation during or after the relevant base period:

- a) the authorised capacity of the installation,*
- b) the average capacity utilisation observed, on average, in installations of the relevant sub-sector,*
- c) the anticipated capacity utilisation during the period and*
- d) the anticipated emissions of the installation under the assumption that the latest technology is used.*

(2) Taking into consideration Sec. 12a, the results of determinations pertaining to the preparation procedure of the National Allocation Plan, the pre-defined parameters and developments within the European Integration framework, allocation ordinances issued in accordance with subsection 1 shall comply with the following criteria to ascertain the targets defined in the climate policy:

- 1. Pursuant to Annex 1, the quantity of emission allowances to be allocated must be reconcilable with the emission reduction potential, including the technological potential, of activities falling under this Federal Law. The allocation procedure takes into account the activity's anticipated trend values of production, energy intensity and carbon dioxide intensity (Business As Usual). The average specific greenhouse gas emissions of the fuel used, its energy efficiency and the potential progress in these areas of activity shall be considered when determining the quantity of allowances to be allocated. The benchmarks derived from the BVT reference documents (BREFs) drawn up within the information-exchange framework of Directive 96/61/EC of the Council concerning integrated pollution prevention and control, OJ No. L 257 of 10 October 1996, pp. 26 shall be used; if no such documents exist for the relevant activity, other objective and transparent standards of comparison shall be used. The allocation procedure takes into account that process-generated emissions cannot be controlled to the same extent as energy-generated emissions and thus uses different methods to calculate allocation quantities for process-generated and energy-generated emissions. Greenhouse gas emissions that are generated by the implementation of voluntary environmental protection measures are to be treated as process-generated emissions.*
- 2. The allocation procedure takes into account the importance for climate policy of using and promoting efficient Combined Heat and Power and efficient district heating schemes. In addition, other emission-free technologies and those especially low in emissions, including energy-efficient technologies, can be taken into consideration.*
- 3. The allocation procedure must comply with the other legal and political instruments of the Community and Austria. Any significant unavoidable change in emissions resulting from new legal requirements shall be taken into account.*
- 4. The allocation scheme may not discriminate among companies or sectors to give certain companies or activities an unjustifiable advantage, in particular under consideration of the requirements of Articles 87 and 88 of the Treaty on European Community.*
- 5. The quantities of emission allowances allocated to the industry and energy sectors shall be reconcilable with the national climate policy. The security of supply with electrical energy shall also be taken into account.*
- 6. The quantity of emission allowances allocated in the relevant period shall conform to the Decision of 25 April 2002 concerning the approval, on behalf of the European Community, of the Kyoto Protocol, OJ No. L 130/1 of 15 May 2002 and the Austrian commitment to reduce its greenhouse gas emissions in the 2008 to 2012 period with regard to the 1990 values, which is included in the Kyoto Protocol. The ratio of the proportion of overall emissions covered by these allowances to the sources of emissions from sources not within the scope of this Federal Law, as well as the national methods of energy and climate policy shall be taken into account. The quantity of emission allowances to be allocated may not exceed the amount likely to be needed under strict application of the criteria.*
- 7. The actual and expected progress of the Austrian contribution to the Community commitments shall be evaluated in accordance with Decision 93/389/EEC for a monitoring mechanism for Community CO₂ and other greenhouse gas emissions, OJ No. L 167 of 09/07/1993, p. 31, and it shall be ascertained that the respective quantities of emission allowances allocated comply with this evaluation.*
- 8. The criteria listed in subsections 1, 3, 4, 5, 6 and 7 shall apply when determining the total quantity of allowances. For allocation at the activity levels, the criteria in subsections 1, 2, 3 and 4, for allocation at installation level, the criteria in subsections 1 and 2 shall apply.*

(3) Where allowances are allocated to installations on the basis of an allocation ordinance, notification shall be made by official notification from the Federal Minister of Agriculture, Forestry, Environment and Water Management.

(4) [obsolete as of 31 December 2007]

(5) The allocation ordinance shall provide for a reserve for new entrants in accordance with Sec. 3 (5). At least 1 percent of the total quantity of emission allowances shall be kept in reserve. If the reserve proves insufficient to cover allocation to these installations, the Federal Minister of Agriculture, Forestry, Environment and Water Management and the Federal Minister of Finance may jointly instruct an appropriate entity familiar with emissions trading to buy the needed emission allowances and make them available to be allocated free of charge to the new entrants. In compensation, the thus instructed entity is assigned a quantity of emission allowances from the reserve for sale on the market in the subsequent allocation period; this quantity shall be equal to that of the allowances bought and made available in the previous allocation period by the instructed entity for the purposes listed in the third sentence. In the event that no entity can be instructed to buy emission allowances, the Federal Minister of Agriculture, Forestry, Environment and Water Management shall buy emission allowances within the available means as budgeted for this purpose under the relevant Federal Budget Law and put them at the disposal of installation owners free of charge. The respective quantity of emission allowances shall be deducted from the total allocation quantity of each following period. Installation owners are notified of allocations from the reserve by official notification from the Federal Minister of Agriculture, Forestry, Environment and Water Management. Applications for allocation from the reserve shall be made within six weeks of approval under the laws relevant for installations, or within six weeks of the announcement of this Federal Law in the case of installations that have already been given approval under the laws relevant for installations, and shall state the information required under Sec. 1 last subsection letters a, c and d and Sec. 5 (1) subsections 1 and 2, as well as information on the estimated date of putting into operation of the installation. The application must be accompanied by the letter of approval issued on the basis of the laws relevant to installations. The applications for allocation from the reserve shall be sorted in ascending order of date of approval under the laws relevant to installations. The allocation ordinance shall lay down further regulations on the allocation of these emission allowances, taking into account that new entrants approved under Sections 4 and 6 have a greater emission allowance requirement. Emission allowances shall be allocated from the fixed reserve of 1 percent for as long as there are emission allowances in reserve. At least a deadline shall be laid down in the allocation ordinance, after which the remaining emission allowances are sold on the market. The revenues thus generated shall be used for climate protection measures in accordance with the Environmental Support Act.

8.7 Tables according to the Commission guidelines

See Annex.