

NATIONAL ALLOCATION PLAN

**FOR PARTICIPATION OF BULGARIA
IN THE EUROPEAN COMMUNITY SCHEME FOR
GREENHOUSE GAS EMISSION ALLOWANCE TRADING**

For the period 2008 - 2012

Sofia, 2007.

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Definitions

- **Allowance:** an allowance to emit one tone of carbon dioxide equivalent during a specified period, which is valid only for the purposes of the greenhouse gas emissions trading scheme.
- **Business as usual:** projection approach that accounts only for the measures that are official governmental policy.
- **Certified emission reduction unit:** equal to a reduction of one tone of carbon dioxide equivalent as a result of a joint implementation project under Article 12 of the Kyoto Protocol.
- **Combustion installation:** any installation which includes one or more piece of stationary technical apparatus in which a combustion process takes place and that together on the same site and under the responsibility of the same operator has a rated thermal power exceeding 20 MW.
- **Degree day:** A unit for assessment of the energy supplied for space heating. It is determined as product of the difference between the standard temperature in the heated space and the average monthly outside temperature and the number of days in the month.
- **Direct double counting effect:** can occur where the carbon dioxide emissions from one or more precisely defined installations included in the greenhouse gas emissions trading scheme are reduced or limited by a certain joint implementation project. The project may be implemented at: (a) the affected installation participating in the scheme; or (b) another installation participating in the scheme; or (c) an installation not participating in the scheme. The situation where a joint implementation project reduces the emissions from several clearly distinguished installations participating in the scheme is also a case of direct double counting of emission reductions.
- **Early credits:** emission reductions verified in the framework of JI projects before the start of the first period of fulfilment of the commitment (2008). Bulgaria must transfer such emission reductions to the country with which it has concluded a bilateral cooperative agreement under the JI mechanism. Emission reductions are transferred in the form of assigned amount units pursuant to Article 17 of the Kyoto Protocol within the first fulfilment period (2008–2012).
- **Emission reduction unit:** equal to a reduction of one tone of carbon dioxide equivalent as a result of a JI project under Article 6 of the Kyoto Protocol.
- **Final list of installations:** is the list of *registered installations*, to which *late installations* have been added, which have filed the necessary data to have their emissions determined and emission allowances allocated by 28 February 2006.
- **Greenhouse gas emissions permit:** permit issued in accordance with Article 131c of the Protection of the Environment Act.
- **Indirect double counting effect:** can occur where a certain joint implementation project has an impact on carbon dioxide emissions from installations from a certain sector included in the greenhouse gas emissions trading scheme, but it is not possible to attribute the emission reductions with any certainty to any of these installations. In other words, while it is clear which sector achieves emission reductions, it is not possible to identify exactly the installations affected by the project. In such cases, the JI project may be implemented at either a participating or a non-participating installation.
- **Installation:** a stationary technical unit where one or more activities covered by the trading scheme are carried out and any other directly associated activities which have a technical

connection with the activities carried out on that site and which could have an effect on emissions and pollution.

- **Late installation:** installation which has been in operation in one year at least of the 2002–2004 period but has not provided sufficient data to have its emissions determined and allowances allocated accordingly by 30 November 2005.
- **New entrant:** any installation carrying out one or more of the activities covered by the greenhouse gas emissions scheme, which has obtained a greenhouse gas emissions permit, or an update of its greenhouse gas emissions permit because of a change in the nature or functioning or an extension of the installation, after 01.01.2007. *Late installations* are not new entrants”
- **No base year installation (NBYI)** – installation which did not operate at more than 30 % of its capacity in compliance with the technologically based operation mode for not less than one full calendar year during the 2002–2004 period, as well as installation built or undergone change of nature or functioning or extension after 1 January 2004, but before 01.01.2007.

Two types of NBYI are defined:

- **NBYI-dormant (NBYI-D)** - installation which did not operate at more than 30 % of its capacity in compliance with the technologically based operation mode for not less than one full calendar year during the 2002–2004 period
- **NBYI-modern (NBYI-M)** – installation built or undergone change of nature or functioning or extension after 1 January 2004, but before 01.01.2007
- **Operator:** any person who operates or controls an installation or to whom decisive economic power over the technical functioning of the installation has been delegated.
- **Planning reserve:** emission allowances set aside to be allocated among installations in the allocation planning process. No such reserve can be allocated after the communication of the National Allocation Plan to the European Commission.
- **Preliminary list of installations:** is the list of *registered installations*.
- **Registered installation:** any installation which has filed sufficient data to have its emissions determined and allowances allocated by 30 November 2005.
- **Reserve:** the quantity of allowances which can be allocated to installations during the trading periods.
- **Reserve for Compulsory Measures:** planning reserve that is set up for issuing additional allowances to installations which, during the 2008–2012 period, are expected to introduce compulsory measures resulting in an emissions increase. Such, for example, are desulphurization measures based on lime or limestone, the change in nuclear units emergency supply arrangements, etc - planning reserve

Abbreviations

AAU	Assigned amount units
AЕAF	Agency for Economic Analyses and Forecasting
BNAP	Bulgarian National Allocation Plan
CER	Certified emission reduction
CI	Combustion installations
CO ₂	Carbon dioxide
CPPC	Complex Prevention and Pollution Control
Directive	Directive 2003/87EC establishing EU ETS
EAE	Executive Agency for the Environment
EC	European Commission
EE	Energy efficiency
EPER	European Pollutant Emission Register
ERU	Emission reduction unit
EU ETS	EU Emissions Trading Scheme
First Stage	First stage of applying the Directive during 2007
SEWRC	State Energy and Water Regulatory Commission
GDP	Gross domestic product
GHG	Greenhouse gases
GVA	Gross value added
IPCC	Intergovernmental Panel on Climate Change
IWG	Interministerial Working Group for NAP
JI	Joint Implementation
KP	Kyoto Protocol
LCP	Large Combustion Plant
MoEE	Ministry of the Economy and Energy
MoEW	Ministry of the Environment and Water
MoRDPW	Ministry of Regional Development and Public Works
NAP	National Allocation Plan
NBYI	No base year installation
<i>NBYI-D</i>	No base year installation - Dormant
<i>NBYI-M</i>	No base year installation - Modern
NEC	National Electricity Company
NER	New Entrants Reserve
NGOs	Non-Governmental Organisations
NIMH	National Institute of Meteorology and Hydrology

NPACC	National Plan of Action on Climate Change
NSI	National Statistical Institute
PEA	Protection of the Environment Act
PDKNI	Planned Development of Known New Installations
RES	Renewable energy sources
RIEW	Regional Inspectorate of the Environment and Water
Second Stage	Second stage of applying the Directive during 2008 – 2012
The Scheme	European green gas emission trading scheme
UNFCCC	United Nations Framework Convention on Climate Change

Introduction

Climate change is a reality and has harmful consequences worldwide, including Bulgaria. Major flooding, storms and droughts are increasingly common, and Bulgaria has not been spared by such disasters. Recent experience has shown how vulnerable we all are to extreme weather and the magnitude of the humanitarian, economic and environmental cost which communities throughout the world have incurred as a result.

Bulgaria has demonstrated its concern and its willingness to join international efforts aimed at reducing climate change by its signature and ratification of the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol.

The Community-wide Emissions Trading Scheme is the main EU instrument for the fulfilment of the Union's commitments under the Kyoto Protocol. Directive 2003/87/EC of the European Parliament and of the Council established a scheme for greenhouse gas emission allowance trading within the Community. Since 1 January 2005, Member State installations covered by the Directive have started reducing their carbon dioxide emissions to levels set, respectively, for the 2005–2008 and for the 2008–2012 period. Emission allowance trading provides flexibility to installation owners in their efforts to achieve emission reductions most efficiently and in accordance with their development strategies.

The Scheme's main elements include:

1. Allocation of emission allowances by means of National Allocation Plans
2. Greenhouse gas emissions permits issued to each installation
3. Monitoring, verification and reporting of emissions
4. Registries to ensure the accounting of transactions concerning emissions allowances
5. Compliance control and penalties

Pursuant to the Directive, from 1 January 2007, the Bulgarian installations covered by the Directive's Annex I will not be allowed to emit carbon dioxide unless they hold an emissions permit. Installations holding such permits will have to monitor their carbon dioxide emissions and report them annually. They will also have to surrender a number of allowances equal to their total emissions during the preceding calendar year.

Before the launch of the trading scheme, the Government will allocate allowances to each installation in accordance with a National Allocation Plan. The process will be based on fair and transparent rules in keeping with the criteria set out in Annex III of the Directive.

The first stage of the Scheme's operation for Bulgaria will begin on 1 January 2007. By that date, the operators under Annex I of the Directive and Article 131c of the Protection of the Environment Act must have procured greenhouse gas emissions permits and have allocated certain numbers of allowances by the Government. Pursuant to their permits, the operators will have to comply with the EC monitoring and reporting requirements.

The development of the Bulgarian National Allocation Plan (BNAP) is coordinated by an Interministerial working group of the Ministry of the Environment and Water, the Ministry of the Economy and Energy, the Ministry of Regional Development and Public Works, the Ministry of Finance, the National Statistical Institute, and non-governmental organisations, including: the Bulgarian Industrial Association and the associations of the industries included in the Scheme, i.e.: the Bulgarian Association of the Cement Industry; the Bulgarian Chamber of the Energy Industry; the Chamber of the Paper and Pulp Industry; Glass Industry; the Chamber of the Ferrous and the Non-Ferrous Industry; the Bulgarian Chamber of the Chemical Industry; the Bulgarian Union of

Ceramic Workers (Order ПД-186/06.04.2005). Technical assistance for the Plan is provided by Bulgarian and Dutch consultants with funding from the PSO Programme of the Government of the Netherlands. Work on the Plan started on 5 January 2005.

BNAP will be based on the following background material:

- Relevant EU Directives, Decisions, guidelines and commentaries
- Act constituting an Amendment to the Protection of the Environment Act implementing the Community Scheme
- Member State NAPs approved or rejected
- Input from seminars and workshops with industries, NGOs, and Government Ministries and Agencies
- EC Peer Review of EU ETS implementation in Bulgaria
- Experience of Member States whose NAPs were approved by the Commission, including: the Netherlands, the UK, Ireland, the Czech Republic, and Poland

The draft's format has taken account of the relevant EC guidelines; it is therefore tabular and follows a set of questions.

Upon the completion of each BNAP development stage, MoEW publishes relevant information on its website www.moew.government.bg

This document presents the Bulgarian Government's BNAP proposal. It sets out the method of allocation for the first and the second operational period under the Directive, the macroeconomic forecasts for the two periods, and the allocation of allowances by sector and installation for the second period as approved by the Government.

Categories of Activities covered by the Directive. Criteria for National Allocation Plans

Categories of Activities referred to in Articles 2(1), 3, 4, 14 (1), 28 and 30 of the Directive

(Annex I)

1. Installations or parts of installations used for research, development and testing of new products and processes are not covered by the Directive.
2. The threshold values given below generally refer to production capacities or outputs. Where one operator carries out several activities falling under the same subheading in the same installation or on the same site, the capacities of such activities are added together.

Activities	Greenhouse gases
<i>Energy activities</i>	
Combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations)	Carbon dioxide
Mineral oil refineries	Carbon dioxide
Coke ovens	Carbon dioxide
<i>Production and processing of ferrous metals</i>	
Metal ore (including sulphide ore) roasting or sintering installations	Carbon dioxide
Installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2,5 tonnes per hour	Carbon dioxide
<i>Mineral industry</i>	
Installations for the production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or lime in rotary kilns with a production capacity exceeding 50 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
Installations for the manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day, and/or with a kiln capacity exceeding 4 m ³ and with a setting density per kiln exceeding 300 kg/m ³	Carbon dioxide
<i>Other activities</i>	
Industrial plants for the production of	
(a) pulp from timber or other fibrous materials	Carbon dioxide
(b) paper and board with a production capacity exceeding 20 tonnes per day	Carbon dioxide

Criteria for National Allocation Plans referred to in Articles 9, 22 and 30 of the Directive

(Annex III)

1. The total quantity of allowances to be allocated for the relevant period shall be consistent with the Member State's obligation to limit its emissions pursuant to Decision 2002/358/EC and the Kyoto Protocol, taking into account, on the one hand, the proportion of overall emissions that these allowances represent in comparison with emissions from sources not covered by this Directive and, on the other hand, national energy policies, and also should be consistent with the national climate change programme. The total quantity of allowances to be allocated shall not exceed the quantity that it is likely to be needed for the strict application of the criteria of this Annex. Prior to 2008, the quantity shall be consistent with a path towards achieving or over-achieving each Member State's target under Decision 2002/358/EC and the Kyoto Protocol.
2. The total quantity of allowances to be allocated shall be consistent with assessments of actual and projected progress towards fulfilling the Member States' contributions to the Community's commitments made pursuant to Decision 93/389/EEC for a monitoring mechanism of Community CO₂ and other greenhouse gas emissions.
3. Quantities of allowances to be allocated shall be consistent with the potential, including the technological potential, of activities covered by this scheme to reduce emissions. Member States may base their distribution of allowances on average emissions of greenhouse gases by product in each activity and achievable progress in each activity.
4. The plan shall be consistent with other Community legislative and policy instruments. Account should be taken of unavoidable increases in emissions resulting from new legislative requirements.
5. The plan shall not discriminate between companies or sectors in a way to unduly favour certain undertakings or activities, in accordance with the requirements of the Treaty, particularly Articles 87 and 88 thereof.
6. The plan shall contain information on the manner in which new entrants will be able to begin participation in the Community scheme in the Member State concerned.
7. The plan may accommodate early action and shall contain information on the manner in which early action is taken into account. Benchmarks derived from reference documents concerning the best available technologies may be employed by Member States in developing their National Allocation Plans, and these benchmarks can incorporate an element of accommodating early action.
8. The plan shall contain information on the manner in which clean technologies, including energy efficient technologies, are taken into account.
9. The plan shall include provisions for comments to be expressed by the public, and contain information on the arrangements by which due account will be taken of these comments before a decision on the allocation of allowances is taken.
10. The plan shall contain a list of the installations covered by the Directive with the quantities of allowances intended to be allocated to each installation.
11. The plan may contain information on the manner in which the existence of competition from countries or entities outside the Union will be taken into account.

12. The plan sets the maximum ERU and CER which can be allocated to operators within the Community scheme in proportion to the allowances allocated to each installation. This proportion must correspond to the principle of supplementary action under the Kyoto Protocol and to the decisions approved in pursuance of the Protocol and UNFCCC.

Summary of Main Allocation Principles

1.	The Government has determined that a total of 302,775,687 CO ₂ emission allowances in the period 2008 - 2012 are allocated in this plan. Of them 288,096,745 are allocated to participants registered before 30 November 2005 and 9,307,806 are allocated to participants who are late before 28 February 2006. Additional 35,439,201 allowances from reserves can be allocated as follows: 23,202,201 from the Unknown new entrants reserve, 743,430 from the reserve for the standardization of degree days and 11,493,570 from the late installations after 28 February 2006 reserve. In addition 1 000 000 per year could be allocated from the cold reserve in case of unscheduled outage electrical facilities.
2.	The allowances are to be allocated in two stages: first, by sector, and subsequently, by installation within each sector.
3.	Sector allocation is to be done on the basis of historical emissions in the base year. Base-year emissions equal the average of the installation's emissions in two of the years 2002, 2003, 2004 in which emissions were highest. Where an installation has not been operational in any two of these years, its single year of operation will be its base year.
4.	Allocation by installation will be done by a IWG approved allocation method based on historical sector and installation emissions, on projected industrial output and emissions by sector. The sum total of allowances allocated to all installations in a sector may not exceed the quantity of allowances allocated to that sector.
5.	The allocation of allowances to any unknown new entrants, in accordance with the Directive, is to be done on the principle of free-of-charge allocation of 23,202,201 allowances previously set in the NER for the period 2008 – 2012 in accordance with the national macroeconomic development forecast of the country. The allowances for the known new entrants and late new entrants are allocated by installations in the plan.
6.	The reserve for planned and unknown new high-efficiency combined generation installations is calculated on the basis of the national indicative target for the introduction of high-efficiency combined generation.
7.	Allowances to new installations are to be allocated on the basis of: (a) Application filed with the competent authority. (b) Valid greenhouse gas emissions permit. (c) Emission projections based on the lowest in the sector emission factor for the base period. If there was no that kind of production within the base period the projected emission factor of the installation is applied.
8.	A planning reserve equal to 5 per cent of the emissions of registered installations is set aside for allocation to installations which had failed to register and communicate data by the 30 November 2005 ("late installations"). Installations which have communicated data by 28 February 2006 are allocated allowances before the communication of NAP to EC.
9.	Allowances to NBYI are to be issued on the basis of: (a) Application filed with the competent authority. (b) Valid greenhouse gas emissions permit. (c) Emission projections based on the average emission factor (CO ₂ emissions per unit of output) for the sector.
10.	Allowances to New NBYI are to be issued on the basis of: a) Application submitted to the competent authority; b) Valid greenhouse gas emissions permit; B) Emission projections based on the best available emission factor (CO ₂ emissions per unit of output) for the sector.

1. 1. Total Quantity of Allowances for Allocation

1.1 Bulgaria's Commitments under the Kyoto Protocol

1.1. What is the Member State's commitment under the Kyoto Protocol?

Bulgaria's greenhouse gas reduction commitment amounts to 8 % for the 2008–2012 period from 1988 serving as base year (as a Party undergoing a transition to a market economy) under KP Article 3(6)). The base year emissions are 138 351 Gg of carbon dioxide equivalent according to the 2003 inventory.

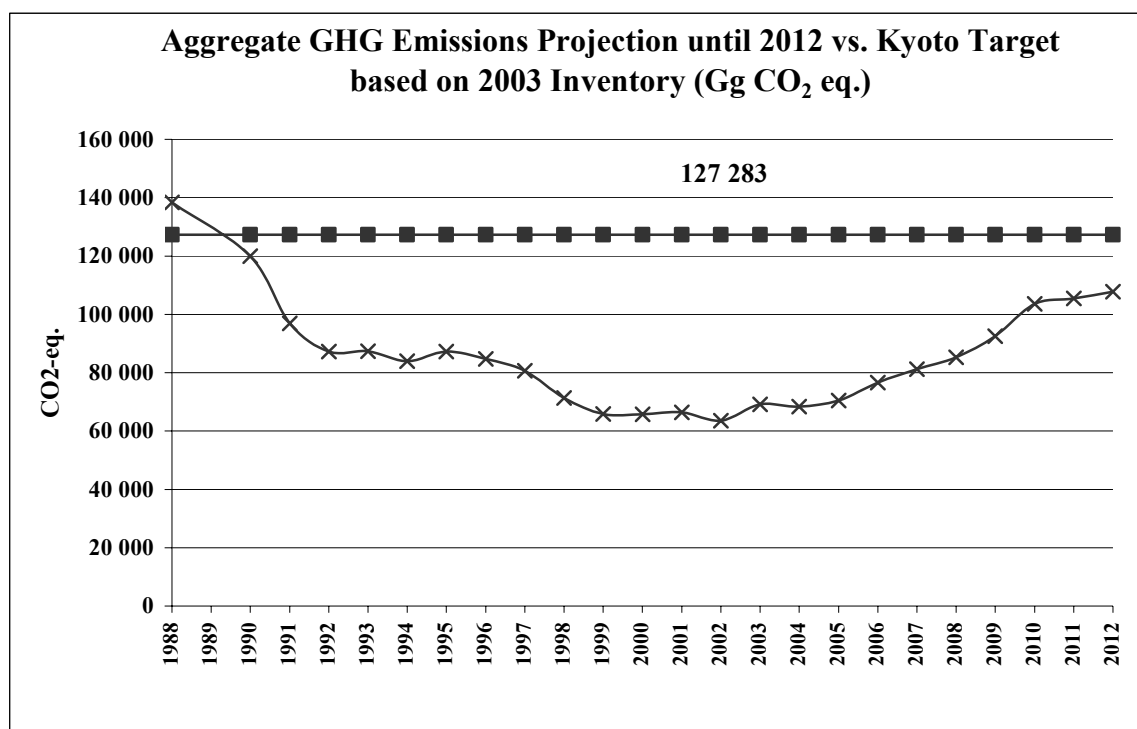
The latest calculations of 2003 place greenhouse emissions in Bulgaria at 69 167 Gg of carbon dioxide equivalent, and net emissions, which is 46 % below the country's KP commitment of 127 283 Gg of carbon dioxide equivalent. The net GHG emissions with accounting of the CO₂ sequestration in the sector "Land Use, Land Use Change and Forestry" were 62 111 Gg of carbon dioxide equivalent in 2003.

Feasibility of Bulgaria's KP Commitment. Calculation of Total Emissions

To assess the feasibility of Bulgaria's KP commitment, the aggregate emissions, forecast at the macroeconomic level (Table 11, Row 1), are compared with the KP commitment.

The emissions forecast and the Kyoto target for the country are shown in the Figure 1.

Figure 1.



The projection results are presented in Table 1. It is obvious that the forecasted emissions are well below the target (127 283 Gg of carbon dioxide equivalent) and the country will not have any problems to fulfil the commitment.

Significant numbers of JI projects were approved in the country. Emission reductions from JI projects already approved and supported have been taken into account in the GHG emissions projection and must therefore be deducted as well from Bulgaria's AAU as shown in table 11 (corrected Kyoto target). The table shows that fulfilment of the corrected target is not an obstacle and the country will have a significant surplus of AAUs.

Table 1. Forecasted Anthropogenic Carbon Dioxide Equivalent Emissions (Gg)

Years	2008	2009	2010	2011	2012
Total anthropogenic greenhouse gas emissions in the country excluding LULUCF (Gg CO ₂ equivalent)	86,425.60	93,901.06	106,550.41	110,363.38	111,098.66
Total CO ₂ emissions excluding LULUCF (Gg)	66,463.46	72,190.76	80,870.52	83,782.14	84,337.78
Total greenhouse gas emissions from sectors not participating in the Scheme (Gg of CO ₂ equivalent)	26,501.00	27,424.00	28,523.00	29,181.00	29,778.00
Total greenhouse gas emissions from sectors participating in the Scheme (Gg of CO ₂ equivalent)	59,924.60	66,477.06	78,027.41	81,182.38	81,320.66
Total CO ₂ emissions from sectors participating in the Scheme (Gg)	55,001.00	60,989.87	71,539.84	74,447.25	74,543.32
Energy activities, incl.:					
-Electricity	22,956.59	26,722.80	31,443.84	31,311.48	29,996.05
-Combined generation	9,210.26	9,299.67	9,494.08	9,550.20	8,015.22
-Heat, public sector	953.17	1,000.57	1,047.97	1,095.37	1,142.77
-Heat, industrial consumption, etc. CI, incl.:					
Chemical products and rubber	452.96	473.37	493.35	512.98	532.31
Food and beverage products	630.16	658.91	687.39	715.96	744.34
Timber and products, other than furniture	225.68	242.84	260.00	277.15	294.31
Textiles and products, other than apparel	201.05	213.80	226.55	239.30	252.04
Metal extraction and casting (non-ferrous)	160.29	163.63	166.74	169.65	172.39
Machine tools, equipment and home appliances	108.86	112.28	115.51	118.56	121.46
Healthcare and social services	371.68	390.17	408.65	427.13	445.62
Agriculture and gaming, and related services	230.65	242.12	253.59	265.06	276.53
Natural gas distribution	219.00	219.00	219.00	219.00	219.00
Refineries and oil products	2,533.13	2,685.11	2,846.22	3,017.00	3,198.01
Cement	5,089.06	5,445.44	8,476.37	8,696.49	8,916.61
Lime	1,692.56	1,779.31	1,866.07	1,952.82	2,039.57
Paper and pulp	582.32	663.69	706.58	748.70	788.49
Glass	413.69	546.45	550.22	591.69	593.07
Ceramics	202.96	206.90	210.12	213.12	215.95
Ferrous metals	6,045.62	6,166.23	6,261.12	6,350.20	6,434.28
Unknown new entrants	1,495.84	2,173.42	4,173.42	6,057.24	8,057.24
Adjustment for compulsory measures	973.38	1,170.85	1,219.76	1,446.77	1,616.67
Adjustment for JI	3,200.87	3,200.87	3,200.87	3,200.87	3,200.87

1.2 Principles, Assumptions and Data to Estimate the Contribution of Sectors covered by the Directive

1.2. What principles, assumptions and data have been used to estimate the contribution of installations covered by the Directive (total and sectoral historical emissions; total and sectoral projected emissions; least-cost approach)? If projected emissions have been used, please describe the projection method and assumptions.

Total Quantity of Allowances for Allocation

The figures in *Total CO₂ Emissions from Sectors Participating in the Scheme* (Table 1) and the following rows are the base data for allowance allocation. The emissions are distributed between participating and non-participating installations. The necessary planning reserves and reserves for later allocation and emission allowances to be allocated under the Plan are part of these emissions. In keeping with EC requirements, the Plan will provide for equal effort, equal right and equal obligation concerning the changes (increase or reduction) in emissions from both groups of sources (participating and non-participating), and for the preservation of their respective emission proportions.

As the emissions are distributed by covered sector and by participating and non-participating installation, the ratio has been determined (below) of the emissions from participating installations by sector, V_{sg}^{2003} , to total emission amounts from all installations by sector, V_{sg0}^{2003} , for the country concerning year 2003, and that ratio has been referred to as $Share_{sg}^{2003}$ of the participating installations in the total emissions of each sector during year 2003 (see Table 4). Then, the emission amounts by sector and for the country which can, from a macroeconomic point of view, be allocated in the Scheme (see Table 2) have been determined by multiplying planned emission amounts for 2008–2012 (see Table 1) by sector shares ($Share_{sg}^{2003}$) from Table 4.

Table 2 also features the two adjustments, i.e., for early credits and for compulsory measures, by which the quantity of allocated allowances is reduced. The known new entrants emissions are incorporated into the emissions of the respective sectors.

Table 2. Emission Amounts by Sector and for the Country Capable from a Macroeconomic Perspective of being Covered by the Scheme (Gg)

Years	2008	2009	2010	2011	2012
Total CO ₂ emissions from sectors participating in the Scheme (Gg)	55,001.00	60,989.87	71,539.84	74,447.25	74,543.32
Total CO ₂ emissions from installations participating in the Scheme (Gg)	49,955.91	55,469.24	65,848.49	68,373.25	68,399.94
Energy activities, incl.:					
-Electricity	22,956.59	26,722.80	31,443.84	31,311.48	29,996.05
-Combined generation	8,161.78	8,240.50	8,411.68	8,461.09	7,109.53
-Heat, public sector	871.53	914.87	958.21	1,001.55	1,044.89
-Heat, industrial consumption. etc. CI, incl.:					
Chemical products and rubber	340.37	355.70	370.72	385.47	399.99
Food and beverage products	41.79	43.87	45.80	47.90	49.91
Timber and products, other than furniture	99.90	107.50	115.10	122.69	130.29
Textiles and products, other than apparel	25.48	27.10	28.71	30.33	31.95
Metal extraction and casting (non-ferrous)	132.86	135.63	138.20	140.62	142.89
Machine tools, equipment and home appliances	29.84	30.77	31.66	32.49	33.29
Healthcare and social services	3.96	4.16	4.36	4.55	4.75
Agriculture and gaming, and related services	7.56	7.94	8.31	8.69	9.06
Natural gas distribution	182.49	182.49	182.49	182.49	182.49
Refineries and oil products	4,214.05	4,466.89	4,734.91	5,019.00	5,320.14
Cement	4,715.27	5,049.55	8,058.38	8,256.39	8,454.41
Lime	593.75	615.53	637.31	659.09	680.88
Paper and pulp	412.98	480.26	509.05	537.08	562.77
Glass	395.46	527.90	531.38	572.58	573.72
Ceramics	157.21	160.34	162.80	165.11	167.27
Ferrous metals	5,117.20	5,222.02	5,302.16	5,377.39	5,448.42
Unknown new entrants	1,495.84	2,173.42	4,173.42	6,057.24	8,057.24
Adjustment for JI	3,200.87	3,200.87	3,200.87	3,200.87	3,200.87
Adjustment for compulsory measures	973.38	1170.85	1219.76	1446.77	1616.67

Once the various types of reserve are determined, including the later allocation and the planning reserves, the table has been drawn up of allowances by sector and the reserve for the country as a whole which from a macroeconomic perspective are capable of being distributed within the Scheme.

The total quantity of allowances for allocation to the registered participants in the Scheme has been determined by recalculation of the projected and adjusted sector emission amounts (see Table 2), meaning that the emission reduction amounts for allowance cancellation in respect of the indirect double accounting of JI emission reductions, unaccounted at the projection stage, has been taken out of the allowances for the electricity subsector.

As a result, based on the “top-down” projection of emission amounts, once the appropriate emission unit reserves are formed and subtracted from V_{Gj} , the total amount of emissions has been determined, which from a macroeconomic perspective, are capable of being distributed among the participants in the Scheme for the 2008–2012 period, i.e., V_j ($j = 2008 - 2012$), together with the various kinds of reserve. The preliminary macroeconomic allocation by sector has also been done (see Table 3). The known new entrants allowances are incorporated into the allowances of the respective sectors.

Table 3. Quantities of Emission Allowances by Sector and Reserves for the Country Capable from a Macroeconomic Perspective of being Distributed by the Scheme

№	Years	2008	2009	2010	2011	2012
1	Total allowances to registered installations	47,952,097	52,393,243	60,363,213	60,904,207	58,611,443
2.1	Energy activities, incl.:					
2.1.1	-Electricity	22,448,622	25,820,226	30,131,982	29,899,682	28,264,803
2.1.2	-Combined generation	8,161,776	8,240,503	8,411,681	8,461,093	7,109,531
2.1.3	-Heat, public sector	871,531	914,871	958,212	1,001,552	1,044,893
2.1.4	-Heat, industrial consumption, etc. CI, incl.:	0	0	0	0	0
	Chemical products and rubber	340,368	355,702	370,719	385,469	399,989
	Food and beverage products	41,792	43,872	45,801	47,903	49,909
	Timber and products, other than furniture	99,905	107,500	115,095	122,691	130,286
	Textiles and products, other than apparel	25,483	27,098	28,714	30,330	31,945
	Metal extraction and casting (non-ferrous)	132,863	135,629	138,204	140,617	142,888
	Machine tools, equipment and home appliances	29,836	30,773	31,657	32,493	33,289
	Healthcare and social services	3,962	4,159	4,356	4,553	4,750
	Agriculture and gaming, and related services	7,561	7,937	8,313	8,689	9,065
	Natural gas distribution	182,488	182,488	182,488	182,488	182,488
3.	Refineries and oil products	4,214,050	4,466,893	4,734,907	5,019,002	5,320,142
4.	Cement	4,715,266	5,049,546	8,058,377	8,256,393	8,454,408
5.	Lime	593,746	615,529	637,312	659,094	680,877
6.	Paper and pulp	412,976	480,258	509,054	537,076	562,773
7.	Glass	395,460	527,902	531,377	572,584	573,719
8.	Ceramics	157,212	160,342	162,805	165,106	167,268
9.	Ferrous metals	5,117,201	5,222,016	5,302,157	5,377,393	5,448,420
10.	Late Installations Reserve	2,497,795	2,773,462	3,292,425	3,418,663	3,419,997
11.	Unknown New Entrants Reserve	1,495,844	2,173,421	4,173,421	6,057,243	8,057,243
12.	New Co-generation Reserve	178,057	334,975	481,172	573,420	932,252
13.	Planning Reserve Day-Degree Standardisation	148,686	148,686	148,686	148,686	148,686
14.	Planning Reserve for Compulsory Measures	973,382	1,170,853	1,219,763	1,446,772	1,616,672
15.	Set-aside for Allowance Cancellation in respect of Indirect Double Accounting in JI Projects	3,022,740	3,654,029	4,321,929	4,494,430	4,881,861

To determine the total quantity of allowances for allocation, Bulgaria has used a combination of two approaches, i.e., *historical emission levels* and *projection approach*.

- ✓ According to the **historical emission levels approach**, the total number of allowances allocated is determined by the share of emissions during a particular accounted year by the installations and activities included in the scheme. In Bulgaria's case, the historical approach has been used to set the base year.

The quantity of allowances and the proportion of emissions from sources outside the scheme have been based on the following information sources:

- National GHG Emissions Inventory, 2003
- Operators' answers to a special questionnaire
- National statistics concerning sectors and installations
- EAE data on comprehensive permits issued and applied for

The 2003 National Inventory is an official document; and installation operators have signed declarations attesting the correctness of the provided information. In addition, these have been checked upon national statistics, comprehensive permits and other available records.

Installation data are gathered pursuant to PEA (Official Gazette 75/27.09.1005). Based on the available information, MoEW, in cooperation with EAE, RIEWs, other Government Agencies and stakeholders, has drawn up a list of potential participants in the Scheme. Announcements have been published in the press and on the Ministries websites.

The installations questionnaire was developed by the project consultants and approved by IWG. The answers have allowed MOEW, using data on fuel and raw materials consumption, and output, to calculate carbon dioxide emissions from participating installations. The EC Monitoring Guidelines were applied to the possible extent during the information collection and processing.

The installations which completed the questionnaire adequately have been included in a list of participants and allowances have been allocated to them under the Plan. The total emissions from registered installations in 2003, V_{R2003} , are the total sum of registered installation emissions, V_i , (as reflected in questionnaires and adjusted by verification):

$$V_{R2003} = \sum V_{i2003},$$

where "I" is the serial number of an installation registered for the Scheme.

The reserve for non-registered ("late") installations, $V_{res2003}$, has been set at 5 per cent of the emissions of registered installations:

$$V_{res2003} = 0.05 \cdot V_{R2003}$$

This is an annual reserve for each year in the 2008–2012 period to make sure that allowances could be allocated to any installations registering after 30 November 2005.

In addition, registered installations data have been used to calculate emissions by sector, according to the IPCC classification, so that results would be comparable with the 2003 GHG Emissions Inventory.

The following IPCC emission sources have been covered:

- Condensation thermoelectric plants
- Heating thermoelectric plants
- Heating plants
- Industrial thermoelectric power plants
- Refineries

- Ferrous metals (fuels)
- Pulp and paper (fuels)
- Other industries (fuels)
- Ferrous metals (process emissions)
- Cement (process emissions)
- Lime (process emissions)
- Glass (process emissions)
- Ceramics (process emissions)
- Pulp and paper (process emissions)

The determined emissions by group of sources, have been compared to the 2003 Inventory(see Table 4).

Table 4. Emissions from Participating Sectors and Installations in 2003 (Gg CO₂)

Sector	All Installations	Registered Installations	Share
-Electricity	19,986.32	19,986.32	1.000
-Combined heat and power generation	9,048.00	7,966.83	0.881
-Heat, public sector	736.00	672.96	0.914
-Heat, industrial consumption, etc. CI, incl.:	2,022.11	699.39	0.346
Chemical products and rubber	328.32	246.71	0.751
Food and beverage products	485.00	31.43	0.065
Timber and products, other than furniture	152.60	67.55	0.443
Textiles and products, other than apparel	138.80	17.59	0.127
Metal extraction and casting (non-ferrous)	145.60	120.69	0.829
Machine tools, equipment and home appliances	87.69	24.03	0.274
Healthcare and social services	287.00	3.06	0.011
Agriculture and gaming, and related services	178.10	5.84	0.033
Natural gas distribution	219.00	182.49	0.833
Refineries and oil products	1,892.90	3,148.98	1.664
Cement	2,622.10	2,358.82	0.900
Lime	1,033.44	259.48	0.251
Paper and pulp	279.20	180.32	0.646
Glass	206.73	190.81	0.923
Ceramics	173.01	132.48	0.766
Ferrous metals	5,344.20	4,513.01	0.844

Any discrepancies between emission sum totals by group of sources and the 2003 Inventory have been appraised and corrected as necessary and feasible. Some of the factors for such discrepancies, both in the Inventory and in installations data, include:

- Considerable number of non-registered installations
- Emission factor differences
- Output not properly accounted for
- Fuels not properly accounted for (in the Inventarisation and the installation's data)

Some of the reporting installations were invited to correct their own data.

As a result, the total 2003 emission amount was determined for registered installations (V_{R2003}), together with the late installations reserve ($V_{res2003}$).

Thus, the total of 2003 emissions covered by the Scheme (V_{S2003}) is expected to equal the sum of registered installation emissions (V_{R2003}) and the reserve ($V_{res2003}$).

According to the **projection approach**, the total amount of emissions from installations is derived from their share in projected development on the basis of “business as usual”.

The projection approach has used the “top-down” and the “bottom-up” principle. Top-down projections include official GDP and GVA growth forecasts by sector allowing to estimate the correlation between GVA growth rates and the changes in industrial output in the sectors covered by the Scheme. Another relevant component of the projections is the country’s projected fuel-energy balance (i.e., end consumption of fuels and energy by sector; least-cost development of the electricity sector; primary gross consumption of fuels and energy). The projections are based on the “business as usual” scenario.

The projections have also taken into account significant policy instruments affecting climate change, such as: the Second National Plan of Action on Climate Change, 2005–2008; the Energy Strategy of the Republic of Bulgaria; the National Long-Term Programme for Energy Efficiency until 2015; the National Long-Term Programme for the Promotion of Renewable Energy Sources, 2005–2015, under preparation; JI projects approved and supported; applicable EU Directives-2003/96/EC, 96/61/EC, 2003/17/EC, 2002/91/EC, 2001/80/EC, 1999/13/EC, 2001/77/EC - taking account of application deadlines and transitional periods.

BNAP has also taken account of projected trends in carbon dioxide and other GHG emissions.

1.3 Total Quantity of Allowances for Allocation

1.3. What is the total quantity of allowances for allocation (free of charge or by auction) and what is the ratio of the total emissions represented by these allowances to the emissions from sources not covered by the Directive? Does this ratio differ from the current proportion of emissions from installations covered? If so, explain the difference by referring to one or more of the criteria under Annex III of the Directive and/or one or more special and transparent criteria.

The total quantity of allowances for allocation in 2008 - 2012 is **298,458,262** tonnes of carbon dioxide equivalent. The country’s total emissions for that period are projected at **508,339.11** million tonnes, given existing policies and measures. Thus, the allowances for allocation in Bulgaria, account for **59.56 %** of the total emissions for the period 2008 - 2012. The addition to this quantity of the allowances of late installations, together with the allowances for unknown new entrants is expected to happen. Thereby, the allocated portion could raise maximum to 63.3 % of the total. The year 2003 emissions from participating installations accounted for 61 % of the national total during that time. This possible increase has been caused by the gradual recovery of the construction materials industry by more than 10 % annually since 2003. Therefore emissions have risen overall, together with the carbon intensity of the gross domestic product. In 2005 this trend persisted on account of a number of infrastructure development projects, which had been more than 15 years overdue. Double-digit growth rates were reported in cement, lime and other construction materials. Naturally, this has resulted in an increase of GHG emissions covered by the Scheme. In 2007 and 2008 will be introduced new flue gas desulphurisation plants in the power sector that will result in further CO₂ emissions increase. Additionally, under the existing agreement with the European Union, two nuclear power units of 880 MW total capacity are going to be decommissioned at the end of 2006, accounting for 12 per cent of the electricity generated in Bulgaria. The resulting electricity shortage is to be compensated by lignite coal installations causing an increase of GHG emissions by 5 million tonnes (or 6 % of the national totals). The coincidence of these factors would result in an increase of the share of the emissions of the EU ETS participants in the country totals and decrease of the share of emissions of the installations not participating in the EU ETS.

However, the actual increase is expected to be smaller, as the rehabilitation of some thermoelectric capacities will be completed in 2007, reducing their specific emission levels. Besides, as nuclear power capacities are decommissioned, Bulgaria’s electricity exports will decline considerably.

The total quantity of allowances to be allocated to participating installations has been calculated by deducting the following planning reserves from national and sectoral emissions, projected macroeconomically: at the national level - new entrants reserve; late participants reserve; at the energy sector level - new cogenerations reserve; compulsory measures reserve; standardisation reserve of district heating companies' day-degrees to account for reduced consumption due to higher than average temperatures in base years; and allowance cancellation reserve in respect of early credits and indirect double counting. The final volume of the allowances to be allocated is determined as a compromise between the macroeconomic and microeconomic GHG emission projections.

Macroeconomic Projection of GHG Emissions for the 2005–2012 period based on “Business as Usual”

A main factor in setting allowable annual emission amounts for participating installations are projected national GHG emissions levels including all anthropogenic sources. To ensure the reliability of these projections, a considerable amount of work had to be done within the short time limits set for the development of the Plan. On 23 January 2006, the planning team had a projection based on the national macroeconomic forecast.

The projection method comprised the following sequence of steps:

1. Macroeconomic forecast of GDP and GVA growth rates for the country and by sector, including both participating and non-participating.
2. Macroeconomic assessment of the correlation between GDP and GVA growth and changes in the output of the participating in the Scheme sectors of the industry.
3. National fuel-energy balance projection, including:
 - Final consumption of fuels and energy by sector, including participating and non-participating sectors and groups of industries
 - Electricity production forecast
 - Projection of gross primary consumption of fuels and energy
4. Projection of GHG emissions in detail corresponding to the above three steps
5. Assessment of the effect of adopted policies and measures on emission reductions in non-participating sectors

The above projections are based on the “business as usual” scenario, without taking account of any new measures which, while specially targeting emission reductions, are not yet official government policies, particularly where the reduction is expected to come from emissions trading. The implications is that, for example, energy efficiency, renewable sources and combined generation are assumed to be developed under the impact of normal market mechanisms. Emission reductions will therefore be encouraged by emissions trading and by the new entrants reserve under the Plan.

The forecast accounts for the GHG emission reduction effect of all the approved and supported JI projects.

At the different stages in the projection development process, the work was done by AEAF, NSI and MoEE. Input from other Government Ministries and Agencies has also been used to cover all branches of industry, agriculture and forestry, transport, services, households, the public sector, and waste. The data used is based on the available information by September 2005.

The projection is based on the Government's programme calling for 5.5 per cent GDP growth. The main macroeconomic indicators are shown in Table 5.

Table 5. GDP and Output Growth Forecast (BGN billion)

Year	2005	2006	2007	2008	2009	2010	2011	2012
GDP at 2003 prices	38.511	40.629	43.026	45.565	48.117	50.643	53.302	56.020
Real GDP growth (%)	5.6	5.5	5.9	5.9	5.6	5.25	5.25	5.1
GVA at 2003 prices, of which:	33.595	35.443	37.570	39.899	42.213	44.450	46.984	49.615
Including:								
Services	19.993	21.093	22.358	23.744	25.121	26.453	27.961	29.527
Industrial sector	9.904	10.448	11.075	11.762	12.444	13.104	13.850	14.626
Agriculture and forestry	3.699	3.902	4.136	4.393	4.648	4.894	5.173	5.463
Output volumes at current prices								
Manufacturing	32.356	36.322	40.311	44.437	49.239	53.852	59.127	64.760
Construction	5.081	5.653	6.141	6.627	7.191	7.702	8.283	8.889
Primary energy	4.499	4.924	5.312	5.687	6.114	6.482	6.891	7.300

Pursuant to the Energy Act, the National Electricity Company (NEC) has developed a projection of electricity consumption and generation until 2012. The projected annual average growth of gross domestic electricity consumption is approximately twice smaller than projected GDP growth (2.9 vs. 5.5 %). Table 6 shows the relevant indicators.

Table 6. Projected Electricity Balance

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Generation (GWh)	42 701	42 546	41 620	44 259	40 770	40 900	41 390	45 170	49 480	49 680	48 230
Gross domestic consumption (GWh)	36 406	37 057	35 741	36 617	36 770	37 410	38 310	39 130	40 530	42 060	43 140
Peak load (MW)	6 768	6 717	6 394	6 502	6 930	7 100	7 240	7 380	7 540	7 770	7 950
Exports (GWh)	6 295	5 489	5 879	7 642	4 000	3 490	3 080	6 040	8 950	7 620	5 090

NEC has developed also a plan for the operation and development of the electricity system which calls for the decommissioning of some existing capacities and the introduction of new ones. On a least-cost basis, the plan allows an estimate of fuel consumption for electricity generation by thermoelectric and combined generation plants. Based on this fuel-to-electricity and fuel-to-heat projection, GHG emission projections have been developed for thermoelectric and combined generation plants:

Table 7. Projected GHG Emissions from Thermoelectric and Cogeneration Plants (Gg)

Years	2007	2008	2009	2010	2011	2012
Condensation plants	22 553	22 641	26 356	31 012	30 881	29 584
Cogeneration plants	9 123	9 210	9 299	9 494	7 884	8 002

The statistical analysis of output volumes by branch of the economy has resulted in the following forecast changes concerning the output of the existing enterprise at ubsectors level in which are operating the installations covered by the Scheme until 2012:

Table 8. Output Indices of Sectors Participating in the Scheme (other than new and NBYI), 2003=1

Сектор	2004	2005	2006	2007	2008	2009	2010	2011	2012
-Electricity ¹	1.053	0.932	1.154	1.144	1.149	1.337	1.573	1.567	1.501
Combined heat and electricity	0.757	1.052	0.983	0.983	0.970	0.980	1.001	1.007	0.838
Heat, public sector	1.037	1.102	1.166	1.231	1.295	1.359	1.424	1.488	1.553
Heat, industrial consumption, etc. CI, incl.:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chemical products and rubber	1.111	1.182	1.250	1.316	1.380	1.442	1.503	1.562	1.621
Food and beverage products	1.058	1.119	1.179	1.238	1.297	1.356	1.415	1.473	1.531
Timber and products, other than furniture	1.029	1.142	1.254	1.366	1.479	1.591	1.704	1.816	1.929
Textiles and products, other than apparel	1.081	1.173	1.265	1.357	1.449	1.540	1.632	1.724	1.816
Metal extraction and casting (non-ferrous)	0.986	1.019	1.049	1.076	1.101	1.124	1.145	1.165	1.184
Machine tools, equipment and home appliances	1.053	1.106	1.155	1.200	1.241	1.281	1.317	1.352	1.385
Healthcare and social services	1.037	1.102	1.166	1.231	1.295	1.359	1.424	1.488	1.553
Agriculture and gaming, and related services	1.037	1.102	1.166	1.231	1.295	1.359	1.424	1.488	1.553
Natural gas distribution	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Refineries and oil products	1.060	1.124	1.191	1.262	1.338	1.419	1.504	1.594	1.689
Cement	1.084	1.168	1.252	1.336	1.420	1.504	1.588	1.672	1.756
Lime	1.084	1.168	1.252	1.336	1.420	1.504	1.588	1.672	1.756
Paper and pulp	1.143	1.285	1.428	1.570	1.713	1.855	1.998	2.140	2.283
Glass	1.038	1.070	1.098	1.123	1.145	1.165	1.183	1.200	1.216
Ceramics	1.027	1.057	1.083	1.107	1.129	1.149	1.167	1.185	1.201
Ferrous metals	1.022	1.050	1.074	1.096	1.117	1.136	1.154	1.170	1.186

Based on the above projected indices for the participating sectors and accounting the emission projections for the new entrants and NBYI from the Scheme as well as the emission projections for the non participating sectors, the macroeconomic emission projection of the total aggregated anthropogenic GHG emissions of the country is determined (table 9).

¹ Index of the total volume CO₂ emissions of all the condensing thermal power plants

Table 9. “Business as Usual” Macroeconomic Projection of Anthropogenic GHG Emissions (Gg)

Years	2008	2009	2010	2011	2012
Kyoto Protocol Commitment (Gg of CO₂ equivalent)	127,283	127,283	127,283	127,283	127,283
Total anthropogenic CO ₂ equivalent emissions in the country (Gg)	85,452.22	92,730.21	105,330.64	108,916.61	109,481.99
Total greenhouse gas emissions from sectors not participating in the Scheme (Gg of CO ₂ equivalent)	26,501.00	27,424.00	28,523.00	29,181.00	29,778.00
Total greenhouse gas emissions from sectors participating in the Scheme (Gg of CO ₂ equivalent)	58,951.22	65,306.21	76,807.64	79,735.61	79,703.99
Total CO ₂ emissions from sectors participating in the Scheme (Gg)	54,027.62	59,819.02	70,320.08	73,000.48	72,926.65
Energy activities, incl.:					
-Electricity	22,956.59	26,722.80	31,443.84	31,311.48	29,996.05
-Combined generation	9,210.26	9,299.67	9,494.08	9,550.20	8,015.22
-Heat, public sector	953.17	1,000.57	1,047.97	1,095.37	1,142.77
-Heat, industrial consumption, etc. CI, incl.:					
Chemical products and rubber	452.96	473.37	493.35	512.98	532.31
Food and beverage products	630.16	658.91	687.39	715.96	744.34
Timber and products, other than furniture	225.68	242.84	260.00	277.15	294.31
Textiles and products, other than apparel	201.05	213.80	226.55	239.30	252.04
Metal extraction and casting (non-ferrous)	160.29	163.63	166.74	169.65	172.39
Machine tools, equipment and home appliances	108.86	112.28	115.51	118.56	121.46
Healthcare and social services	371.68	390.17	408.65	427.13	445.62
Agriculture and gaming, and related services	230.65	242.12	253.59	265.06	276.53
Natural gas distribution	219.00	219.00	219.00	219.00	219.00
Refineries and oil products	2,533.13	2,685.11	2,846.22	3,017.00	3,198.01
Cement	5,089.06	5,445.44	8,476.37	8,696.49	8,916.61
Lime	1,692.56	1,779.31	1,866.07	1,952.82	2,039.57
Paper and pulp	582.32	663.69	706.58	748.70	788.49
Glass	413.69	546.45	550.22	591.69	593.07
Ceramics	202.96	206.90	210.12	213.12	215.95
Ferrous metals	6,045.62	6,166.23	6,261.12	6,350.20	6,434.28
Unknown new entrants	1,747.92	2,586.71	4,586.71	6,528.62	8,528.62

Adjustments of the “Business as Usual” Macroeconomic Projection for Compulsory Measures resulting in Emission Increases and for JI Project Credits

The “business as usual” macroeconomic projection does not take account of a number of non-economic factors impacting greenhouse gas emissions. These come from official government policies and have a direct bearing on the covered installations. The projection must therefore be adjusted for them.

The **adjustment for compulsory measures resulting in emission increases** has been introduced with a view to allocating additional allowances to installations which will comply with such measures in 2008–2012. Among these measures is for example flue gas desulphurisation using lime or limestone, and desulphurisation of the oil products in the refineries.

The size of the adjustment, V_{RP}^j , for each year “j” is determined on the basis of the planned emission reductions of pollutants (mainly SO₂), keeping within Bulgaria’s international

commitments, and is equal to GHG emissions resulting from the measures (reflected in Rows 1, 3 and 4 of Table 11).

Adjustment for emission reductions (early credits included) on account of approved and supported JI projects (V_{cr}).

Bulgaria's assigned amount units (AAU) reflect the emission amounts it has been allowed under the Kyoto Protocol. Any joint implementation (JI) projects in respect of which early credits have been approved must be taken into account to determine the change in allowed emissions. The emission reduction units (ERU) approved or supported for transfer to other countries as early credits in the framework of JI projects result in decrease in the allowed emission amounts for the 2008–2012 period.

The annual adjustment equals one-fifth of the amount of early credits already approved or planned for approval in the framework of all JI projects. The early credits adjustment has been reflected in Bulgaria's KP commitment.

Emission reductions from already approved and supported² JI projects have been taken into account in the GHG emissions projection and must therefore be deducted as well from Bulgaria's AAU to keep the EC requirement of avoiding the double allocation of these allowances.

Table 10. Adjustments to the Macroeconomic Projection (Gg of CO₂ equiv)

№	Year	2008	2009	2010	2011	2012
1.	Compulsory measures, Gg CO ₂ eqv.	973.38	1,170.85	1,219.76	1,446.77	1,616.67
2.	Early JI credits approved, Gg CO ₂ eqv	624.50	624.50	624.50	624.50	624.50
3.	Early JI credits supported, Gg CO ₂ eqv	256.19	256.19	256.19	256.19	256.19
4.	JI emission reductions approved, Gg CO ₂ eqv	1,616.57	1,616.57	1,616.57	1,616.57	1,616.57
5.	JI emission reductions supported, Gg CO ₂ eqv	703.60	703.60	703.60	703.60	703.60
6.	Total JI credit adjustment, Gg CO ₂ eqv	3,200.87	3,200.87	3,200.87	3,200.87	3,200.87

The compulsory measures adjustment is reflected in Table 9 as an increase in the country's emissions in the 2008–2012 period; and the adjustment for approved JI projects, as a reduction in its KP commitment. The result is the adjusted GHG emissions projection for the period (see Table 11):

² Supported are the projects that have received letter of support based on the Project Idea Note (PIN) while approved are the projects that have received letter of approval that follows an estimate by the Steering Committee according to an established set of criteria. The estimate is performed based on the Project Design Document and the validation report from an independent company.

Table 11. Macroeconomic Projection of Anthropogenic GHG Emission Adjusted for Compulsory Measures and Early Credits

№	Year	2008	2009	2010	2011	2012
	Adjusted KP Commitment, Gg CO₂ eqv.	124,082	124,082	124,082	124,082	124,082
1	Total anthropogenic CO ₂ equivalent emissions in the country, Gg CO ₂ eqv.	86,426	93,901	106,550	110,363	111,099
2	Total GHG emissions from sectors not participating in the Scheme, Gg CO ₂ eqv	26,501	27,424	28,523	29,181	29,778
3	Total GHG emissions from sectors participating in the Scheme, Gg CO ₂ eqv	59,925	66,477	78,027	81,182	81,321
4	Total CO ₂ emissions from sectors participating in the Scheme, Gg CO ₂	55,001	60,990	71,540	74,447	74,543
5	Unallocated emission rights, Gg CO ₂	37,657	30,181	17,532	13,719	12,983
6	Unallocated emission rights-annual average, Gg CO ₂ eqv.	22 414				

1.4. Emission Reduction Measures outside the Scheme. Energy Policy

1.4. What policies and measures will be applied to sources not covered by the Directive? Will Kyoto Protocol mechanisms be used? If so, how far will these go and what steps have been taken already (legislation, financial resources)?

As a coordinator for the Second National Climate Change Plan, MoEW cooperates with the Government Ministries and Agencies responsible for national measures. This Plan has taken account of their respective projections. The following emission reduction measures are envisaged by sector:

Energy

Energy Efficiency

Given the still rather high energy intensity of the economy, households included, energy efficiency (EE) has become a national and regional priority, and a priority for industrial branches. The Energy Efficiency Act, together with five EE Regulations³, build up the legal framework for introducing the energy efficiency into industry, transport, services, households, and agriculture significant energy consumers.

The Long-Term National Programme for Energy Efficiency is based on projected adverse trends in the primary and end energy consumption until 2015, caused by economic development and the substitution of solid, liquid and gaseous fuels for electricity. To offset these negative tendencies, a number of legislative, organisational and financial measures have been developed.

The Energy Efficiency Fund is responsible for the funding of EE projects; and there are also other credit lines and financing instruments for EE and/or EE in combination with renewable energy sources.

³ Regulation concerning the Energy Characteristics of Sites and Facilities (OG 108/2004); Regulation concerning Heat Conservation and Energy Savings in Buildings (OG 5/2005); Regulation concerning the Energy Efficiency Certification of Buildings (OG 108/2004); Regulation concerning Energy Efficiency Audits (OG 112/2005); Regulation laying down the circumstances and the procedure relating to the registration of persons performing energy efficiency certification and audits of buildings, and the communication of information (OG 5/2005).

Renewable Energy Sources

The introduction of renewable energy sources (RES) in the framework of Bulgaria's legal harmonisation with EC law is provided under the Energy Act. RES incentives include preferential electricity purchasing prices.

An important element of Bulgaria's RES policy is the promotion of biomass and liquid biofuels. Hydroelectric generation and the utilisation of wind and geothermal energy also attracts interest. The country has adopted an indicative target to achieve 11 % share of RES in total domestic electricity consumption by 2010 in case of favourable climate conditions. A Long-Term National Programme for the Promotion of RES, 2005–2015 is under development, and that has also been taken into account, so far as climate change is concerned, for the purposes of BNAP.

Manufacturing and Construction

Given the sector's restructuring and migration to less energy intensive technologies and the energy savings introduced by new owners after the privatisation of enterprises, the total sum of process and combustion emissions in 2003, had dropped by some 52 % compared to the base year 1988.

Measures in this sector include: heat loss reduction; promotion of natural gas; monitoring of industrial energy consumption; modernisation of steam generators and compressor installations; and the introduction of highly efficient construction machinery. In the cement industry, some of the necessary fuel will come from tyre recycling and other combustible waste.

Households and Services

Measures in the sector include: household gas supply and various financing arrangements (including JI projects) for the introduction of solar collectors, hybrid hot-water installations, etc. measures aimed at reducing energy consumption.

Transport

Measures to reduce energy consumption in the sector include: the introduction of dispatch systems to manage road and railway transportation; railway and public urban transport modernisation; infrastructure improvements and the introduction of biofuels.

KP Mechanisms

Bulgaria has supported the use of mechanisms under the Protocol and will continue to do so. The Joint Implementation mechanism (Article 6) is considered to be an important initiative encouraging investment in energy efficiency, renewable energy sources, combined generation, and new low-carbon and carbon-free technologies. Bulgaria has developed and applies operational rules and evaluation criteria for JI projects.

The so called "Linking Directive" 2004/101/EC amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms, brings together the Kyoto project-based mechanisms and the Community scheme. This development has resulted from efforts to find economically feasible ways for the enterprises to achieve GHG emission reductions. Emission reduction units, in the framework of JI projects, and certified emission reductions, in the framework of the "Clean Development Mechanism" (CDM) (Article 12), are recognised up to a certain percentage in respect of enterprises "obligations under EU ETS", being regarded as equivalent to emission allowances.

However, the Linking Directive has limited the scope of, and the opportunities for, such projects, especially so in the new Member States, which are also host countries of JI projects. This

has happened as a result of the EU requirement to avoid the so called “direct or indirect double counting” of GHG emission reductions (i.e., emissions reduced in the framework of JI projects may not be allocated to installations under EU ETS).

In projects having direct effect, when they were implemented after 2001, with a view to avoid the double counting of emission reductions, precise quantity of allowances allocated to the installation at which the reduction is achieved, is cancelled proportionally to the quantity of ERUs transferred to the other party in the project.

Indirect double counting occurs in JI projects resulting in reduced energy consumption in the grid or in the generation of electricity (i.e., energy efficiency or RES). Such projects are implemented at installations outside the Scheme but affect installations within it.

Therefore, a number of allowances is set aside in order to avoid double counting in the framework of JI projects. Where direct double counting is the case, the appropriate number of allowances is cancelled as originally allocated to the concerned installation; and in the case of indirect double counting, allowances are cancelled in the electricity generation sector.

During the second emission trading period (2008-2012 r.) the maximum share of ERU's and CERU's, which can be used to cover the liabilities of the operators, is limited to 20 % of the allowances allocated to the operators.

1.5 National Energy Policy

1.5. How has the national energy policy been taken account of in the calculation of the total quantity of allowances for allocation? What has been done to ensure the conformity of the total quantity of allowances for allocation to Decision 2002/358/EC or to the Kyoto Protocol?

The climate change targets have been synchronised with the main strategic objective of rational use of energy resources set in the National Energy Strategy of 2002 and the Long-Term National Programme for the Promotion of Renewable Energy Sources under preparation. The policies and measures aimed at encouraging energy efficiency and RES (see Section 1.4 above), in addition to their direct effect on emissions reduction, would reduce Bulgaria's dependence on energy imports and therefore are fundamental to the national energy policy. Other sectors, not expressly covered by Directive 2003/87/EC (e.g., households, transport), also have a considerable potential for the reduction of energy consumption and, accordingly, of the necessary energy output and emission allowances to the energy sector.

The National Energy Strategy and the Long-Term National Programme for the Promotion of Renewable Energy Sources envisage the following measures:

Electricity and Heat Generation:

- Maintained share of nuclear energy in the country's energy balance by commissioning new capacities
- Increased share in the country's energy balance of natural gas-fired electricity and heat generation
- Priority development of combined electricity-heat generation
- Increased share in the country's energy balance of energy produced from renewable sources by appropriate policy incentives
- Rehabilitation of large thermoelectric power plants expected to continue to operate for more than 20 000 hours post-2008

Electricity and Heat Distribution:

- Reduced losses of electricity and heat in transmission networks

Renewable Energy Sources

- Use of biomass for heating and for the generation of electricity and heat
- Commissioning of new hydroelectric capacities
- Use of geothermal resources
- Increased share of wind generation
- Solar thermal and photovoltaic panels

Most of the above measures are capable of attracting investment in the framework of KP project-based mechanisms and of being implemented on a JI basis.

1.6 Ensuring Compliance with the Criteria under Annex III of the Directive

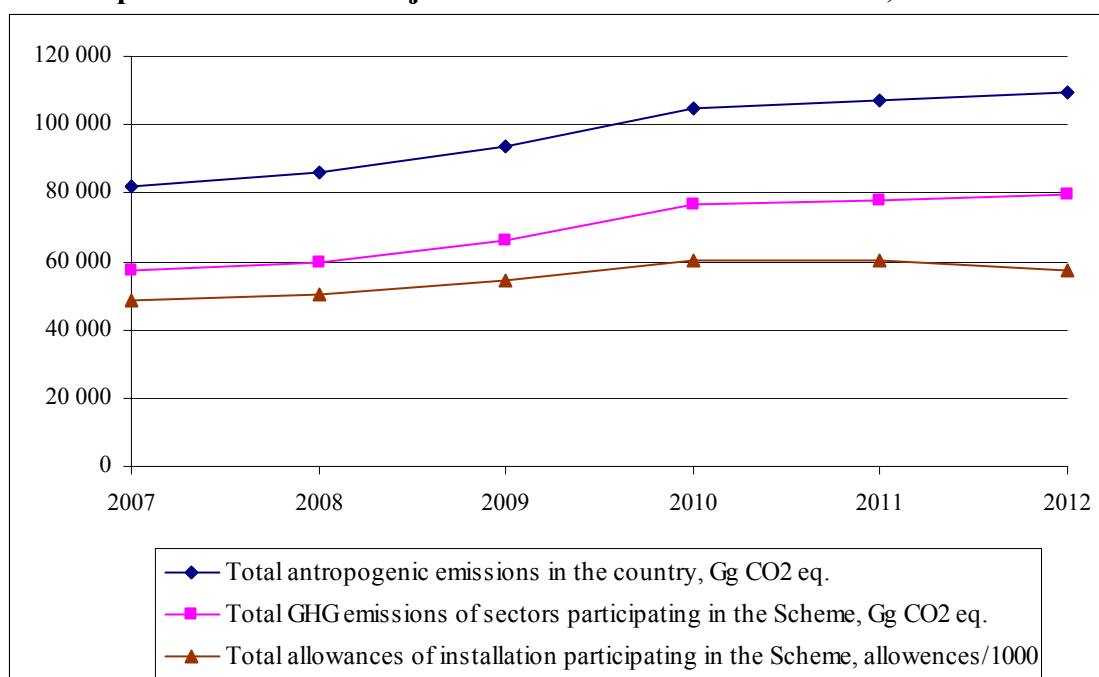
1.6. What will be done to ensure that the total quantity of allowances does not exceed the necessary quantity for the strict application of the criteria under Annex III of the Directive? How is the correspondence ensured with current or projected emissions pursuant to Decision 93/398/EEC?

BNAP has been developed in full compliance with Annex III criteria. Emission historical data and projections are the official ones for the country and have been developed independently from the Plan. Therefore, no inaccuracies are expected.

The total quantity of allowances for allocation in the period 2008 - 2012 is within projected emissions subject to existing measures. All emission estimates, current and projected, comply with Decision 93/398/EEC.

Figure 2

Top-down Emission Projections and Allowance Allocations, 2007–2012



1.7–1.9 Account Taken of Emissions Reduction Potential and of EU Legislation. Waiver of Allocation by Auction

1.7. Please explain, in Section 1.4 below, how the emissions reduction potential, including the technological one, has been taken into account in the calculation of the total quantity of allowances for allocation.

See Section 4.1 below.

1.8. Please list, in Section 5.3 below, the EU legislation and policies taken into account in the calculation of the total quantity of allowances for allocation.

See Section 5.3 below.

1.9. If a Member State intends to allocate allowances by auction, please state the proportion of the total quantity to be sold and the manner in which the auction will be held.

Bulgaria does not intend to use the option of auctioning some of the allowances in the initial allocation process. All allowances under the BNAP for 2008 – 2012 will be allocated initially free of charge.

2. Allowances for Allocation at Sector Level

2.1. What method of allocation has been used at sector level? Has the same method been used for all activities? If not, explain the reasons for using a different method; how it was developed, in detail; and why it is believed not to give the sectors concerned an undue advantage within the Community.

Allocation is first done by sector and then, among the installations within each sector.

Allocation of Allowances by Sector

At sector level, the quantity of allowances to be allocated among the installations is calculated as a compromise between the macroeconomic level sectoral projection and the total of verified projections provided by the participating installations. At this stage, a comparison takes place between the data produced by the “top-down” approach and by the “bottom-up” approach to identify and address any inaccuracies. These are then reconciled with the 2003 National GHG Inventory to ensure a match between the allowances for allocation and Bulgaria’s KP commitment. The process is described in further detail below.

BNAP includes the following sectors under Annex I to the Directive:

- Energy activities (excepting incinerators of hazardous or solid household waste)
- Extraction and processing of ferrous metals
- Mineral processing
- Pulp and paper

A single method of allocation has been used for all sectors.

Bottom-Up Emission Projections of Registered Participating Installations by Sector

The allocation of the total emissions amount covered by the scheme among the participants has been based not only on emission projections (see section 1.3) “top-down”, but also, on the bottom-up projections coming from the installations. The latter are based on the installations’ own respective development forecasts set out in the questionnaires as part of the registration process.

The same sectors as in section 1.3.1 are defined. Based on installations data, emission totals have been determined by sector and subsector: a total of seven sectors and four subsectors for each year j of the period. Here, subsectors have been treated as sectors

Thus, for Sector “ g ”:

$$V_{Sg}^j = \sum_i V_{ig}^j, \text{ where}$$

V_{Sg}^j are Sector “ g ” bottom-up projected emissions for the year “ j ”

V_{ig}^j are Installation “ i ” from Sector “ g ” bottom-up projected emissions for the year “ j ”

Scheme-wide total bottom-up projected emissions for the year “ j ”:

$$V_S^j = \sum_g V_{Sg}^j, \text{ where}$$

V_S^j are bottom-up projected emissions for the year “ j ”.

This is the way in which, for each sector/subsector and for all sectors together, bottom up emission projections have been developed and grouped as follows: active installations, known new entrants, NBYI and known new cogenerators. The bottom-up projection data for the period 2008-2012 are given as follows: for active installations (Table 12); for known new entrants including NBYI-M (Table 13); for NBYI-D (Table 14); and for known new cogenerations (Table 15).

**Table 12. Bottom-Up CO₂ Emissions Projection by Sector:
Active Installations in the period 2002 – 2004, (kt)**

Years	2008	2009	2010	2011	2012
Total CO ₂ emissions from installations participating in the Scheme (Gg)	46,893.51	48,691.24	48,668.69	49,087.59	48,740.99
Energy activities, incl.:					
-Electricity	21,230.79	22,756.14	23,704.21	24,009.01	24,645.69
-Combined generation	8,682.87	8,871.03	8,964.31	8,999.31	7,962.76
-Heat, public sector	671.67	686.87	695.12	706.54	717.66
-Heat, industrial consumption, etc. CI, incl.:					
Chemical products and rubber	397.02	397.02	397.02	397.02	397.02
Food and beverage products	76.51	79.37	86.82	89.78	90.65
Timber and products, other than furniture	85.80	86.78	87.75	88.72	89.70
Textiles and products, other than apparel	28.84	29.85	30.86	31.88	32.89
Metal extraction and casting (non-ferrous)	174.10	178.99	184.14	187.36	190.90
Machine tools, equipment and home appliances	94.38	96.61	98.13	99.53	100.96
Healthcare and social services	4.09	4.09	4.09	4.09	4.09
Agriculture and gaming, and related services	10.31	10.60	10.60	10.60	10.60
Production and distribution of gaseous fuels	181.09	181.09	181.09	181.09	181.09
Refineries and oil products	4,572.40	4,580.41	4,588.42	4,596.44	4,596.44
Cement	3,309.55	3,309.55	2,154.81	2,154.81	2,154.81
Lime	369.53	377.53	394.62	395.01	395.66
Paper and pulp	215.84	217.47	219.84	222.59	224.94
Glass	300.41	300.41	300.41	300.41	303.10
Ceramics	233.21	250.52	257.72	261.63	267.43
Ferrous metals	6,255.10	6,276.91	6,308.72	6,351.77	6,374.61

**Table 13. Bottom-Up CO₂ Emissions Projection by Sector:
Known New Entrants (kt)**

Year	2008	2009	2010	2011	2012
Ceramics	2.03	2.51	2.51	2.51	2.51
Glass	158.42	287.05	287.05	325.06	323.24
Cement	528.45	664.71	3,726.41	3,726.41	3,726.41
Ferrous metals	75.76	94.70	94.70	94.70	94.70
Electricity	0.00	2,710.12	5,420.23	5,420.23	5,420.23

**Table 14. Bottom-Up CO₂ Emissions Projection by Sector:
NBYI-D (kt)**

Year	2008	2009	2010	2011	2012
Lime	225.35	225.35	225.35	225.35	225.35
Ceramics	5.66	5.66	5.66	5.66	5.66
Glass	18.55	18.55	18.55	18.55	18.55
Pulp and paper	104.17	145.76	148.86	151.18	151.18
Cement	837.92	837.92	587.05	587.05	587.05
Heat, industrial consumption, etc. CI: Food and beverage products	1.02	1.25	1.34	1.60	1.78
Electricity	2,591.39	2,591.39	3,120.12	3,120.12	3,120.12
Combined generation (electricity and heat)	154.02	154.02	154.02	154.02	154.02
Ferrous metals	0.54	0.61	0.68	0.75	0.89

**Table 15. Bottom-Up CO₂ Emissions Projection by Sector:
Known New Cogenerators (kt)**

Year	2008	2009	2010	2011	2012
Combined generation	281.79	281.79	347.79	347.79	347.79

The emissions total of active installations, known new entrants, NBYI, and known new cogenerators (Table 24) is a bottom-up projection of CO₂ emissions by sector (see Table 16)

Таблица 16. Прогноза за емисиите на CO₂ по сектори (“отдолу нагоре”) kt

Year	2008	2009	2010	2011	2012
Total CO ₂ emissions from installations participating in the Scheme (Gg)	51,878.58	56,712.63	62,809.00	63,268.57	62,920.47
Energy activities, incl.:					
-Electricity	23,822.18	28,057.65	32,244.56	32,549.36	33,186.04
-Combined generation	9,118.68	9,306.84	9,466.11	9,501.11	8,464.57
-Heat, public sector	671.67	686.87	695.12	706.54	717.66
-Heat, industrial consumption, etc. CI, incl.:					
Chemical products and rubber	397.02	397.02	397.02	397.02	397.02
Food and beverage products	77.53	80.62	88.16	91.38	92.43
Timber and products, other than furniture	85.80	86.78	87.75	88.72	89.70
Textiles and products, other than apparel	28.84	29.85	30.86	31.88	32.89
Metal extraction and casting (non-ferrous)	174.10	178.99	184.14	187.36	190.90
Machine tools, equipment and home appliances	94.38	96.61	98.13	99.53	100.96
Healthcare and social services	4.09	4.09	4.09	4.09	4.09
Agriculture and gaming, and related services	10.31	10.60	10.60	10.60	10.60
Production and distribution of gaseous fuels	181.09	181.09	181.09	181.09	181.09
Refineries and oil products	4,572.40	4,580.41	4,588.42	4,596.44	4,596.44
Cement	4,675.92	4,812.19	6,468.27	6,468.27	6,468.27
Lime	594.88	602.88	619.98	620.37	621.01
Paper and pulp	320.01	363.23	368.70	373.77	376.12
Glass	477.38	606.01	606.01	644.02	644.88
Ceramics	240.90	258.69	265.89	269.80	275.60
Ferrous metals	6,331.39	6,372.22	6,404.10	6,447.22	6,470.20

Reconciliation of Emission Allowance Quantities by Sector

The above **bottom-up** projection by sector, subsector, and total has been compared with the macroeconomic projection (see Section 1; Table 3). The exercise has been meant to reconcile any discrepancies between the bottom-up and the top-down projections, and between the year 2004 projection (top-down) and the installations' reported figures for that year.

If the discrepancies over the 2005–2012 period are negligible, a compromise version of the projection may be adopted by IWG and by the Bulgarian Ministries concerned.

In the case of more significant discrepancies, which may jeopardise the fulfilment of Bulgaria's KP commitment, a full revision of the bottom-up projections is in order, covering projected output volumes and matching them with the respective government policies as reflected in the top-down macroeconomic projections. The associations of industry are involved in the discussion. As a result of these activities, a consensus must be achieved between the CO₂ emissions projections by sectors and subsectors for the period 2008 - 2012, resulting in a table with projection of the quantity distribution of emissions between the sectors. A comparison between the macroeconomic and bottom-up projections for the participating installations is given in Table 17 for the period 2008 – 2012.

Table 17. Comparison of the Macroeconomic and the Bottom-Up Projection for Participating Installations

No	Years	2008	2009	2010	2011	2012
1	Total allowances to registered installations (macroeconomic)	47,952,097	52,393,243	60,363,213	60,904,207	58,611,443
	Total allowances to registered installations (bottom-up)	51,370,614	55,810,053	61,497,141	61,856,767	61,189,219
2.1	Energy activities, incl.:					
2.1.1	Electricity (macroeconomic)*	22,448,622	25,820,226	30,131,982	29,899,682	28,264,803
	Electricity (bottom-up)	23,314,214	27,155,073	30,932,701	31,137,556	31,454,792
2.1.2	Combined generation (macroeconomic)	8,161,776	8,240,503	8,411,681	8,461,093	7,109,531
	Combined generation (bottom-up)	9,118,680	9,306,839	9,466,113	9,501,113	8,464,571
2.1.3	Heating, public sector (macroeconomic)	871,531	914,871	958,212	1,001,552	1,044,893
	Heating, public sector (bottom-up)	671,668	686,867	695,115	706,538	717,656
2.1.4	Heat, industrial, incl.:					
	Chemical products and rubber (macroeconomic)	340,368	355,702	370,719	385,469	399,989
	Chemical products and rubber (bottom-up)	397,017	397,017	397,017	397,017	397,017
	Food and beverage products (macroeconomic)	41,792	43,872	45,801	47,903	49,909
	Food and beverage products (bottom-up)	77,529	80,617	88,161	91,385	92,433
	Timber and products, other than furniture (macroeconomic)	99,905	107,500	115,095	122,691	130,286
	Timber and products, other than furniture (bottom-up)	85,803	86,777	87,750	88,724	89,697
	Textiles and products, other than apparel (macroeconomic)	25,483	27,098	28,714	30,330	31,945
	Textiles and products, other than apparel (bottom-up)	28,837	29,850	30,863	31,876	32,889
	Metal extraction and casting (non-ferrous) (macroeconomic)	132,863	135,629	138,204	140,617	142,888
	Metal extraction and casting (non-ferrous) (bottom-up)	174,098	178,985	184,139	187,363	190,902
	Machinery, equipment and home appliances (macroeconomic)	29,836	30,773	31,657	32,493	33,289
	Machine tools, equipment and home appliances (bottom-up)	94,377	96,613	98,128	99,529	100,958
	Healthcare and social services (macroeconomic)	3,962	4,159	4,356	4,553	4,750
	Healthcare and social services (bottom-up)	4,094	4,094	4,094	4,094	4,094
	Agriculture, gaming, and related services (macroeconomic)	7,561	7,937	8,313	8,689	9,065
	Agriculture and gaming, and related services (bottom-up)	10,312	10,599	10,599	10,599	10,599
	Natural gas distribution (macroeconomic)	182,488	182,488	182,488	182,488	182,488
	Natural gas distribution (bottom-up)	181,094	181,094	181,094	181,094	181,094
3.	Refineries (macroeconomic)	4,214,050	4,466,893	4,734,907	5,019,002	5,320,142
	Refineries (bottom-up)	4,572,400	4,580,412	4,588,424	4,596,436	4,596,436
4.	Cement (macroeconomic)	4,715,266	5,049,546	8,058,377	8,256,393	8,454,408
	Cement (bottom-up)	4,675,921	4,812,185	6,468,265	6,468,265	6,468,265
5.	Lime (macroeconomic)	593,746	615,529	637,312	659,094	680,877
	Lime (bottom-up)	594,884	602,879	619,977	620,365	621,012
6.	Pulp and paper (macroeconomic)	412,976	480,258	509,054	537,076	562,773
	Pulp and paper (bottom-up)	320,015	363,226	368,699	373,772	376,119
7.	Glass (macroeconomic)	395,460	527,902	531,377	572,584	573,719
	Glass (bottom-up)	477,378	606,014	606,014	644,023	644,879
8.	Ceramics (macroeconomic)	157,212	160,342	162,805	165,106	167,268
	Ceramics (bottom-up)	240,901	258,695	265,887	269,799	275,603
9.	Ferrous metals (macroeconomic)	5,117,201	5,222,016	5,302,157	5,377,393	5,448,420
	Ferrous metals (bottom-up)	6,331,393	6,372,218	6,404,099	6,447,219	6,470,203

- The two electricity sector projections show significant discrepancy because the operators of the thermal power plants when developing the bottom-up projection were not accounting the Capacity Rehabilitation Programme leading towards energy efficiency increase in the electricity sector, neither have considered the early phase out of the Bulgarian nuclear capacity and the reduction of electricity production due to the Capacity Rehabilitation Programme.

The differences between both projections are insignificant in qualitative and quantitative aspect and the IWG developed a compromise for the period 2008 – 2012, used for allocation by sectors. This compromise is given in Table 18.

Table 18. Compromise CO₂ Emissions Projection by Sector for the period 2008-2012

(t, allowances)

№	Sector/Years	2008	2009	2010	2011	2012	Σ₂₀₀₈₋₂₀₁₂
	Energy activities, incl.:						
1.	Electricity	22,808,060	26,785,488	31,633,038	31,524,787	30,212,314	142,963,686
2.	Combined generation	9,719,584	9,853,027	10,018,253	10,060,459	7,787,051	47,438,374
3.	Heating, public sector	771,599	800,869	826,664	854,045	881,275	4,134,451
4.	Heat, industrial consumption	1,022,085	1,042,326	1,066,410	1,083,996	1,098,149	5,312,965
5.	Refineries	4,214,050	4,466,893	4,588,424	4,596,436	4,596,436	22,462,241
6.	Cement	4,675,921	4,812,185	6,468,265	6,468,265	6,468,265	28,892,901
7.	Lime	594,884	602,879	619,977	620,365	621,012	3,059,117
8.	Pulp and paper	320,015	363,226	368,699	373,772	376,119	1,801,831
9.	Glass	436,419	566,958	568,695	608,303	609,299	2,789,675
10.	Ceramics	199,056	209,518	214,346	217,453	221,435	1,061,809
11.	Ferrous metals	5,724,297	5,797,117	5,853,128	5,912,306	5,959,312	29,246,160
Total allowances (quantity based on data submitted until 30.11.2005)		50,485,970	55,300,486	62,225,900	62,320,187	58,830,666	289,163,210

2.2. If the potential, including the technological one, has been taken into account at this level, please state so here and provide details under Section 4.3 below.

Technological potential has not been taken into account at this level.

2.3. If the Community legislation and policies have been taken into account in the determination of quantities by activity, please list the relevant instruments under Section 5.3 and state here the ones taken into account and the manner in which this has been done.

The BNAP has taken into account the impact on carbon dioxide emissions (both increase and reduction) of the following Directives: 2003/196/EC, 2002/91/EC, 2001/77/EC, 96/61/EC, 2003/17/EC, 2001/80/EC, 1999/13/EC. See also Section 5.3

2.4. If any third-country competition has been taken into account, please explain how.

The BNAP does not envisage any special measures to take account of any third-country competition.

The BNAP was consulted with the Bulgarian Competition Protection Commission. It has expressed its point of view that the BNAP is in compliance with the Directive 2003/87/EC. Moreover, the free competition rules as well as the Governmental support rules will not be violated

3. Allowances for Allocation at Installation Level

3.1. What method of allocation has been used at installation level? Has the same method been used for all installations? If not, explain the distinction between installations within the same activity, how it has been drawn, in detail, and why it is believed not to give the installations concerned an undue advantage within the country.

Two groups of installations are defined in the sectors, depending on the time of registration:

- Registered installations - installations which have filed sufficient data by 30 November 2005 to have their emissions determined and allowances allocated.
- Late installations - installations which have been in operation at least in one year of the 2002–2004 period, but have not provided sufficient data until 30th of November 2005 to precisely determine their emissions and according allocation of allowances.

The allocation for both groups follows the same methodology, but the late installations receive allocation later, just before presentation of the plan to the Government or if registered after the submission of the plan, by February 15 of the year, they receive allocation the next year of submission of the necessary data. The general rules for allocation of the allowances to the late installations are given in the Late Installations Reserve section (i.e. subsection to section 5).

Specific rules for allocation of the allowances apply to two other groups of installations::

- **New entrant** - any installation carrying out one or more of the activities covered by the greenhouse gas emissions scheme, which has obtained a greenhouse gas emissions permit, or an update of its greenhouse gas emissions permit because of a change in the nature or functioning or an extension of the installation, after 1st of January 2007. *Late installations* are not considered as new entrants: The rules that are applicable for allocation of allowances to the New Entrants are given in New Entrants Reserve subsection to the section 5
- **No base year installation (NBYI)** – installation which has not been operating at least one full calendar year during the 2002–2004 period at more than 30 % of its capacity, in compliance with the technologically based operation mode, as well as installation built or undergone change of nature, functioning or due to extension after 1st of January 2004, but before 1st of January 2007. Different rules apply for allowances allocation to the two types of NBYI:
 - **NBYI-dormant (NBYI-D)** - installation which has not been operating at least one full calendar year during the 2002–2004 period at more than 30 % of its capacity, in compliance with the technologically based operation mode - when a NBYI-D applies for an emissions permit on account of having resumed normal operation, and when such a permit has been issued, the installation receives allowances under the new entrants rule for newly-commissioned installations (see New Entrants Reserve in section 5) but the applicable emission factor is the average for the activity in the sector's base year. The allocated allowances are taken from the distributed to the sector allowances.
 - **NBYI-modern (NBYI-M)** – installation built or undergone change of nature, functioning or due to extension after 1 January 2004.- where a NBYI-M applies for an emissions permit the installation receives allowances under the new entrants rule for newly-commissioned installations (see New Entrants Reserve in section 5). The

allocated allowances are taken from the allowances of the known new entrants reserve of the sector.

The allocation methodology envisages to allocate the allowances to the known new entrants and NBYI, then subtract the allocated to them allowances from the allocated to the sector allowances and then proceed with allocation to the installations that have been operational in normal mode within the period 2002-2004.

Here are explained the allocation rules for the biggest group of installations – installations that have been operational in normal mode within the period 2002-2004..

The allowances allocation between the individual installations within every separate sector is based on the historical emissions of the installations that have registered and have supplied data in due time, the production volumes and sectoral emissions projections and the methodology that is given below.

The installation-level allocation for these installations has been done on the basis of historical emissions for the 2002–2004 period using a base year. Based on the analysis of verified operational data provided by each installation, their respective historical emissions have been calculated and a base year for each installation has been set.

The use of a base year is necessary in order to avoid the effect of any non-recurrent emission reductions caused by short-term crises or longer downtime during repairs or modernisation. An installation's base year is the average sum of its emissions in two of the following years 2002, 2003 or 2004 in which the installations' emissions levels were the highest. If an installation has not been operational in any two of these years, its third year of operation has been set as its base year.

The installation-specific base-year emission amount is introduced into the formula as E_i^{bg} (where "i" is the installation's serial number; and "g" is its sector's serial number).

The quantity of allowances set for a sector is distributed between the installations. Each installation is getting for each year a quantity of allowances proportionate to the product of its base-year emissions and the growth rate of emissions from the sector's base year.

The base-year emissions, E^{bg} , of each sector "g" are the total sum of the base-year emissions E_i^{bg} of all the installations in it:

$$E^{bg} = \sum_i E_i^{bg}$$

The quantity of allowances for each installation has been limited by the installation's capacity and installation's forecast. No installation can receive more allowances than the forecasted by its emissions. Any remainder of allowances above that quantity is being reallocated among the other installations in the sector in proportion to their respective base-year emissions. An installation's capacity is defined as its maximum annual level of output set out in its IPPC permit; in case of absence of such permit – installation's capacity is defined at 90 % of the installation's nominal annual output or of its maximum reported output during the 1988–2004 period. The rule for limitation up to the forecasted emission level does not apply to the electricity and public heat production sectors .

This arrangement ensures the equal treatment of installations in a sector, allowing each of them to increase their output (by the average growth rate of emissions from the sector) from their base year up to their capacity or the forecasted in the business plan production volume.

At the next step, the allowances allocated to each installation have been adjusted for the necessary allowances reserve to account for compulsory measures, the standardisation of day-degrees., new and late installations, as well as introduction and exploitation of new cogeneration.

When, during the process of issuing of the allowances, it is found that the data used to allocate the allowances is not correct and this had resulted in allocation of higher number of allowances, the over allocation is subtracted from the allocation and is transferred to the New entrants reserve. The corrected number of allowances are transferred to the account of the installation.

3.2. If historical data have been used, please state whether these have been defined in accordance with the Commission's monitoring and reporting guidelines for the purposes of Article 14 of the Directive, or any other guidelines, and/or whether such data have been subjected to independent verification.

The identified installations were required to provide historical data in accordance with the Commission's guidelines. The guidelines had been approved by IWG on 3 May 2005, and letters were accordingly sent out to the installations, and, in parallel, information concerning the development of the Plan had been published on the websites of MoEW, MoEE, and MoRDPW on 5 May 2005.

As already mentioned in p.1.2., the EC monitoring guidelines were applied to the possible extent during the data collection questionnaire composition and the data processing.

After the installations' data had been compared to NSI data, the installations were asked to confirm the historical emissions calculated on that basis. This process is a further verification conducted to finally clarify the correct data by the concerned persons and consultants

3.3. If any early action or clean technology has been taken into account at this level, please state so here and provide further detail under Section 4.2 or 4.3 below.

Bulgaria does not intend to take into account any early action or clean technology (see reasoning under Sections 4.2 and 4.3 below.)

3.4. If the Member State intends to include unilaterally any installations carrying on activities under Annex I of the Directive but below the capacity limits referred to therein, please explain the reasons for this and, in particular, the effect on the internal market, any potential market distortions, and impact on the Scheme from an environmental perspective.

Bulgaria does not intend to include unilaterally such installations under Article 24 of the Directive.

The Government's decision concerning the total number of allowances to be allocated to the installations within the Scheme is based on the best available information on the installations covered by the Directive. Bulgaria does not need to include any additional installations with a view to fulfilling its KP commitment and, therefore, the financial and administrative burden on small and medium-sized enterprises in connection with the inclusion of smaller capacity installations would not be justified..

3.5. If the Member State intends to exclude temporarily certain installations, until 31 December 2007 at the latest, from the Scheme, please explain in detail how the requirements under Article 27(2) (a)–(c) of the Directive will be complied with.

At this stage, Bulgaria does not intend to exclude any installations until 31 December 2007.

4. Technical Aspects

4.1. Potential, Including the Technological Potential

4.1.1. Has Criterion 3 alone been used to determine the total quantity of allowances or has the distribution of allowances by activity been used as well?

4.1.2. Please describe the process (including significant assumptions) and each source used to assess the emissions reduction potential of the activities. In what way has it been ensured that the total quantity of allowances allocated corresponds to the potential?

4.1.3. Please explain the method or formula used to determine the quantity of allowances for allocation at the general level and/or at the level of activities, account being taken of the activities' emissions reduction potential.

4.1.1 Criterion 3 requires the allocation of allowances to be consistent with the potential to reduce emissions, including the technological potential, of activities covered by the Directive. The criterion is mandatory with respect to the total national quantity of allowances and is optional with respect to the allowances to be allocated to activities or sectors.

Criterion 3 has been applied to determine the total national quantity of allowances to be allocated under BNAP. A special feature of Bulgaria's economical transition is the existence of industrial facilities which have been out of operation over the last four or more years (referred to in the Plan as *NBYI*) and which, if become operational again, would be covered by the Scheme. These installations are technologically obsolete and no recent emission records are associated with them which has made the assessment of their technological potential to reduce emissions for the purposes of Criterion 3 impossible

For the purposes of Criterion 3 data has been used from the Second NPACC. According to it, the emissions reduction potential by the year 2010 amounts to 4.0 million tonnes in the energy sector, and 0.7 million tonnes, in industry.

Due to the absence of data on the emissions reduction potential by emission source, we have been unable to assess this potential by group at sector level.

4.1.2 Bulgaria's approach to controlling GHG emission levels is by limiting, as far as possible, the highly carbon-intensive growth of the industries.

4.1.3 Given the applicability of Criterion 3 at the national level only (see 4.1.1) and observing the the Commission's requirements, BNAP envisages an equal effort from both groups of emission sources (participating and non-participating installations), i.e., the equal rights and obligations of each of these two groups concerning emission changes and the preservation of their respective proportions

4.1.4. If the benchmarking method has been used as a basis for allocation to individual installations, explain the type of benchmarking and the formula used. Which benchmark has been used and why is it considered the most appropriate to achieve progress? Why has the core output projection been deemed to be the most suitable for development? Please provide an in-depth answer.

No benchmarking has been used as a basis for allocation to individual active installations. A method similar to benchmarking is applied to new entrants. Newly-commissioned installations are issued allowances on the basis of the lowest emission factor for the activity in the base period, and when there was no that specific production activity – based on the project data for the installation. The NBYI are allocated based on the average emission factor for the activity within the base period. Thus, new installations must be as efficient as the most efficient active installation; and NBYI must be more efficient than the sector average.

4.2. Early Action

4.2.1. If any early action has been taken into account in the allocation of allowances to individual installations, please describe the manner in which this has been done. Please list and explain in detail the measures which have been recognised as early action and the criteria on which they have been recognised as such. Please demonstrate that the investment/action implemented has resulted in emissions reduction exceeding what is required under EU or national legislation existing at the time the action was taken.

4.2.2. If benchmarking has been used, please describe the basis used to define the group of installations to which benchmarking has been applied and the reasons for choosing a particular benchmark. Please also state the output values used and show proof of their appropriateness.

4.2.1. According to Annex III of the Directive, NAP may accommodate early action. The Commission has provided the following guidelines for the purposes of this criterion:

“Early action” means an action taken by an installation covered by the Directive aiming to reduce emissions prior to the publication of the National Allocation Plan and communicated to the Commission. According to Criterion 4, only measures which an operator has taken above the requirements of Community legislative instruments may qualify as early action. Any more rigorous national legislation applicable to all installations or to a particular activity is to be reflected in the emissions reduction potential (Criterion 3). Therefore, early action is limited to emission reductions exceeding such reductions achieved in compliance with the Community or national legislation, or to action taken in the absence of such legislation.

The guidelines require also that any early action, if used, must be applied in the calculation of the quantity of allowances to be allocated among individual installations.

The above raises two issues: first, the identification of clear cases of early action; and, second, the development of a mechanism under BNAP for rewarding such early action.

Regarding the first issue, the Commission’s guidelines suggest that the allocation of allowances in respect of early action depends on the motives behind such action. That is to say, all actions taken on other than voluntary basis, i.e., in compliance with express legal provisions, must be excluded. Where an emissions reduction has resulted in net economic benefit, regardless of any future limits on carbon dioxide emissions, there is little reason to reward such a reduction.

It is worth noticing that in view of Bulgaria's EU accession and, therefore, the predictability of future measures limiting GHG emissions, the fair application of these two criteria for the identification of early action is difficult.

Instead, the BNAP method of allocation is based on the average of a two-year historical period of highest emissions between 2000 and 2004. This gives a market-regulated bonus to installations which have during this period invested in reducing their emissions, as a form of early action, without the need for further administrative regulation. This historical approach rewards also, to a certain extent, the combined generation.

4.2.2. No benchmarking has been used.

4.3. Clean Technologies (if applicable)

4.3.1. How have clean technologies, including energy-efficient technologies, been taken into account in the allocation process?

4.3.2. If at all, which clean technologies have been taken into account and on what basis have they been identified as such? Is any of the energy generation technologies taken into account eligible for state aid by reason of the environment in any Member State? Please state whether any industrial technology taken into account is a "best available technology", as defined under Directive 96/61/EC, and explain the way in which it contributes to the reduction of GHG emissions.

4.3.1. Criterion 8 expands on Criterion 3 down to installation level and requires that NAP should set out the manner in which clean technology, including energy-efficient technology, has been taken into account. As concerning Criterion 7, the Commission's guidelines suggest that Criterion 8 is not obligatory.

According to the Commission, this criterion must be met if the Member State clearly states in its NAP whether it intends to take clean technology into account and, if so, how.

Bulgaria has not taken clean technology into account.

4.3.2. Bulgaria believes that the main result of the application of the Directive, by pricing GHG emissions, will be the automatic initiative to use clean and energy-efficient technology. Therefore, the clean technologies for which BNAP provides incentives are those aimed at energy efficiency and the use of renewable energy sources as prioritised by the National Energy Strategy (by a set-aside for JI projects having an indirect effect on electricity generation), and combined generation (by a special purposeful reserve).

5. Community Legislative and Policy Instruments

5.1. Competition Policy

5.1. If the competent authorities have received from operators an application to form a pool and if the application is to be granted, please attach a copy of such application to NAP. What proportion of total allowances allocated will be accounted for by the pool? What proportion of the sector allocation will be accounted for by the pool?

The Directive allows the operators of installations from a country to form pools for the purposes of their obligations thereunder. Such pools are subject to the approvals by the concerned Member State and by the Commission.

In Bulgaria, the obligations shall be complied in pools only when the following conditions are present:

Registered in Bulgaria person is the operator of two or more installations registered in Bulgaria, carrying the same activity and also covered by the Scheme. Such person will be allowed to transfer allowances between these installations without any financial transactions. Reporting and verification in such case will be done separately for each installation within four months from the end of the reporting calendar year.

An Operator of installation has received and is implementing compulsory instructions to replace another operator, given by the operator of the electricity network. These instructions are related to imposed measures for the public benefit and/or to ensuring risk proofed, reliable and continuous supply of electricity and/or to the efficient operation of the national electricity network.

5.2 Internal Market Policy (Article 43 of the Treaty)

5.2.1. How are new entrants to participate in the Scheme?

A new entrant is any installation carrying out one or more of the activities covered by the greenhouse gas emissions trading scheme, which has obtained a greenhouse gas emissions permit, or an update of its greenhouse gas emissions permit because of a change in the nature, functioning or an extension of the installation, after 1st January 2007.

Bulgaria has set up a new entrants reserve (NER) for installations carrying one or more of the activities covered by the Scheme and provided with a GHG emissions permit after **31st December 2007**. Any installation which has its permit re-issued after 1st January 2007 will also be treated as a new entrant because of a change in nature, functioning or extension, as well as, any installation which has been refused a permit by 1st January 2007 and which will join the Scheme at a later date.

NER is subdivided into two parts:

1. the known new entrants reserve (planned or under construction at the time of NAP preparation); and
2. the unknown new entrants reserve (new installations to be placed into service after the NAP preparation but unknown at the time of NAP preparation).

Transfer of Allowances between Operators

The transfer of allowances between operators will be done through the National Registry in the framework of the allowances market and subject to the provisions of the national legislation. Every person that has got an account in the National Registry can transfer allowances from and to his account without any limitations.

When a person registered in Bulgaria is the operator of two or more installations registered in Bulgaria and carrying on the same activity covered by the Scheme, such person will be allowed to transfer allowances between such installations without any financial transactions.

Reporting and verification in such cases will be done separately for each installation within four months from the end of the reporting calendar year

Decommissioning of Installations

Installations which in any year operate at a capacity below the threshold for participation in the Scheme, as defined by the Directive, will be treated as decommissioned installations and allowances will not be issued to them for subsequent years. Such planned allowances but not issued will be transferred to NER.

If a decommissioned installation resumes operations at the required capacity, it will be treated as a new entrant.

The rule for transferring allowances from old installations to new-replacing installations, gives to the owner/operator of an old installation the right to obtain the amount of allowances for the old installation in case it is replaced by a new one.

The rule for transfer of allowances requires replacement of old inefficient installations, emitting great amounts of greenhouse gases, by introducing new technologies and as a result achieving relatively lower levels of emitting for a unit produced in a long term perspective.

To take advantage from this rule, the old installation must be completely inoperative. The new installations/technologies emit smaller amounts of greenhouse gases and as a consequence the operators need less quantity of allowances. In this case the owners will be interested in replacing the old installations with new ones in order to receive additional financing for the investments made, by selling the rest of their allowances. This way the investors will regain the made investments, on a lower price for produced unit.

The allowances received for the old installation shall be transferred to the new installation for the period of four years, but not longer than the application period of the BNAP 2008 – 2012. For this four years period, the new installation shall not receive quote in correspondence with the New entrants rules. The limitation of this period is necessary in view of avoiding discrimination and inequality between participants in the EU ETS during the next period of application. If the capacity of the new installation exceeds the capacity of the old installation, the operator will receive additional quantity of allowances compensating capacity difference, regarding the rules for New Entrants.

The rule permits the allowances of several old installations to be transferred to one new installation and vice versa – the allowances for one old installation to be transferred to several new installations.

Corrections of the volume of the allocated allowances

When an installation is being limited in production volume by an IPPC permit or another document due to environmental protection reasons, a number of allowances that correspond to the limitation is drawn out of the installation account and transferred to the new entrants reserve.

If in a particular year an installation has reduced its production volume below the volume based on which the allowances were allocated to that installation (equivalent to the calculated base year production volume and the projected growth of the production volume), then, the operator of the installation is obliged to transfer the corresponding to the reduced production volume allowances surplus to the competent authority according to the Article 131k of the Environmental Protection Act, which transfers that volume to the New Entrants Reserve.

When verifying the annual emission report of every operator of a registered installation, the verifier should check the interrelation between the production volume for the year under consideration and the volume, based on which the allowances were allocated to the installation.

5.2.2. Where a new entrants reserve has been set aside, how has the size of this reserve been determined and what basis will the allocation of allowances among new entrants be done? How does the allocation formula for new entrants compare with the one for existing installations from the same sector? Please explain also how will any remainder of allowances in the reserve be treated at the end of the period. What will be done if the demand for allowances exceeds the availability in the reserve?

The Community allocation methodology allows for reserves. A Member State may decide not to set up any reserve but to require unregistered installations and new entrants to purchase allowances on the market. However, in Bulgaria's circumstances this would present considerable difficulties to the investors. Therefore, the allocation methodology adopted for BNAP envisages reserves for later allocation which together will form a single allocation reserve.

The reserves represent actual emission allowances which can be allocated following the rules, set out in the Plan, for dealing with applications for reserve allowance allocation.

In addition, planning reserves have been set up, which are to be allocated in the course of the planning process itself..

Late Installations Reserve ($V_{res2003}$)

For the 2008–2012 period, this reserve has been calculated as a percentage (5.0 %) of the projected emissions of all registered participants. It accounts for the emission amounts of non-participating installations from participating sectors and represents a potential increase in the total quantity of allowances for allocation.

Table 19. Late Installations Resrve

Years	2008	2009	2010	2011	2012
Total CO ₂ emissions from participating installations (Gg)	49,955.91	55,469.24	65,848.49	68,373.25	68,399.94
Late Installations Reserve (Gg CO ₂)	2,497.80	2,773.46	3,292.42	3,418.66	3,420.00

The main rule governing allocation from the reserve is that a greater number of allowances than what would have been issued to them if they had registered on time, using the same allocation method, cannot be issued to the late installations. Depending on the year in which a late installation becomes registered, the following allocation procedure will be applied:

1. Late installations which are registered between 30th November 2005 and 28th February 2006 are placed on the final list of participating installations and allowances are issued for them as if they had registered on time, using the same method. Such installations are included in the Plan communicated to the Commission. If the reserve appears to be inadequate, a reduced number of allowances is issued for each installation registered during the above period in proportion to the shortage, while any installations that register later in subsequent years do not get free allowances at all.
2. Late installations which become registered after 28th February 2006, but before the end of 2007, receive for participation during the year 2007, as many allowances as if they had registered on time, using the same method. When its emissions permit has been issued after the beginning of year 2007, an installation receives a proportion of its allowances for the year, based on the remainder of calendar days until the year-end. If the reserve appears to be inadequate, each late installation registered during the above period receives a reduced

number of allowances in proportion to the shortage, while any installations that register later in subsequent years do not get free allowances at all.

3. Late installations which are issued emissions permit in year 2008, receive with 5 % less allowances for every year from the period in comparison with the quantities they would have been allocated in case of timely registration, using the same method. If the reserve appears to be inadequate, a reduced number of allowances is issued for each installation registered during the year 2008 in proportion to the shortage, while any installations that register later in subsequent years do not get free allowances at all.
4. Late installations in every subsequent year, receive with 5 % less allowances for every year of delay. Thus, an installation registered in 2012 shall be allocated with 25 % less allowances. If the reserve appears to be inadequate or runs out of enough allowance quantities during particular year, all late with the registration installations during that particular year shall receive decreased amount of allowances in proportion to the shortage, while any installations that register later in subsequent years do not get free allowances at all.

When the emissions permit is issued after the beginning of a current year, an installation receives a proportion of its allowances for the year, based on the remainder of calendar days until the year-end.

The final and total amount of allowances for the late installations in the period after 28th of February 2007 shall be determined until 28th of February of the year that follows the year of registration. The annual not allocated remainder from this reserve is transferred to the New entrants reserve.

Planning Reserve for Compulsory Measures (V_{RP}^j)

This planning reserve has been set up with a view to issue additional allowances to installations which, during the 2008–2012 period, are expected to introduce compulsory measures resulting in an emissions increase. Such, for example, are desulphurisation measures based on lime or limestone, the change in nuclear units emergency supply arrangements, etc.

The quantity, V_{RP}^j , for each year "j" is based on the country's planned reduction of pollutant emissions (mainly SO₂) under international instruments and is equal to the emissions adjustment of the macroeconomic projection for this issue (see Section 2.3.2).

Table 20. Compulsory Measures Reserve

Years	2008	2009	2010	2011	2012
Compulsory measures reserve (Gg CO₂)	973.38	1170.85	1219.76	1446.77	1,616.67

In the planning process, additional allowances from this reserve are allocated to individual installations for the year in which the measure is expected to be introduced and for all the years thereafter. The planned date of placement into service of a pollution reducing installation under the operator's comprehensive permit is the date from which the additional GHG allowances will apply.

Any remainder of this reserve after the end of the planning process is to be transferred to the new entrants reserve.

Any installation which had not announced a date for the introduction of compulsory measures during the planning process may apply subsequently for additional allowances as a new entrant when it applies for modification of the permit to account for the new measure.

New Entrants Reserve (other than cogenerations)

The Community allocation method allows for a new entrants reserve.

The volume of the new entrants reserve was set in chapters 1 and 2. It incorporates the volume of allowances for three groups of installations:

- Known new entrants
- Unknown new entrants
- NBYI-M

A new entrant is any installation falling under the definition of this term (see Section 5.2.1 above).

Discussed here are the **newly-commissioned installations** that became or are expected to become operational during the 2004–2012 period and of which the placement into service:

- (a) has either been planned already or is known; or
- (b) is still unknown,

but, in either case, both forms are part of the macroeconomic projection.

This reserve has been set up in the framework of the allowances projected for the country, the group of installations or the sector concerned.

Installations Already Planned or Known

This reserve is calculated for each group “g”, as the total sum of the reserve for individual new installations:

$$V_{RN}^{gj} = \sum_i V_{RN}^{ij} \quad (\text{for each year } j \text{ of the period})$$

The reserve for an individual new installation “i” for the year “j”, V_{RN}^{ij} , is calculated (and then, allocated) on the basis of the projected output of the new installation for the year, P_N^{ij} , and the emission factor of the existing installation, $E_{f \text{ min } g}$, which has the lowest emissions per unit of output per year for the 2002–2004 period compared to all the installations in the group “g”. In case of no specific production activity within the base period the allocation is based on the project data for the installation. In the energy sector, the emission factor is also differentiated by type of fuel (local or imported coal, natural gas, fuel oil, etc.):

$$V_{RN}^{ij} = P_N^{ij} \cdot E_{f \text{ min } g}$$

For the above purpose, as the emissions of participating installations for the period 2002–2004 were analysed, the installation of the lowest emission factor was identified in each group.

Installations can be presented for inclusion on the list of planned or known new entrants by their owners or by MoEW, MoEE, MoRDPW, or other organisations concerned, and planned output volumes are subject to approval by IWG. These installations are part of the list of allowances allocated and their respective quantities of allowances will be distributed upon issuance of the permit after placement into service

The allowances volume to be issued for a known new entrant could be reduced on issuing the GHG permit and (or) IPPC permit in compliance with the permit (permits) parameter. The leftovers are transferred to the new entrants reserve.

Unknown New Entrants

This reserve has been set up at the stage of the macroeconomic projection for new entrants unknown at the time.

Table 21. New Entrants Reserve

Years	2008	2009	2010	2011	2012
Known new entrants and NBYI-M reserve, including combined generators (Gg CO ₂)	4,985.07	8,021.39	14,140.30	14,180.98	14,179.48
Unknown new entrants reserve (Gg CO ₂)	1,747.92	2,586.71	4,586.71	6,528.62	8,528.62

Participating installations undergoing either a change in nature or in functioning, or an extension are subject to the following allocation rule:

- when an installation is expanded and exceeds its original capacity, the rule applicable to new entrants (see above) applies for the volume of production that exceeds the original capacity;
- the installation retains its allowances originally allocated if the original installation is kept in operation.
- when a part of an installation is fully decommissioned, the corresponding to the decommissioned capacity volume of originally allocated allowances is deducted from the new entrant allocation

Installations to which permits were refused by 1st January 2007 must discontinue operations on this date or reduce their capacity below the upper threshold for participation in the Scheme. Once the permit has been issued, these installations will be subject to the allocation rule applicable to new entrants.

When an NBYI installation applies for emissions permit in case of recovery of normal operational mode and the permit is issued, the installation receives allowances regarding the rule for New entrants – newly built installations, but using the average emission factor for the particular type of activity according to the sector's base year.

New entrants receive their allowances after issuance of an emissions permit and placement of the installation into service. When this occurs after the beginning of the current year, the installation receives a proportion of its allowances for the year based on the remainder of calendar days until the year-end

When the output of a new entrant is to be determined, reference is made to the installation's business plan and IPPC permit.

Any annual remainder of the new installations reserve is invalidated and the allowances are transferred to the next year reserve. Any remainder of the new installations reserve after 2012 and will be auctioned.

When this reserve is depleted the next new participants do not receive free allowances.

New Cogenerators Reserve

Two cogenerators reserves are set up: R_{CG1} and R_{CG2} , forming part of the annual new entrants reserve

R_{CG1} is the reserve for electricity generation by new gas-fired cogenerators.

R_{CG2} is the reserve for heat generation by cogenerators being new entrants into the Scheme. It will reflect the transformation of a heat generator, having thermal capacity below 20 MW, into a cogenerator having thermal capacity above 20 MW, making it eligible for the Scheme.

The size of R_{CG1} reflects the country's emissions from electricity generation by new high efficient gas-fired cogenerators and increases total emissions from the combined generation sector. The increase is based on the expected electricity output of new cogenerators having an emission

factor of 0.35 t CO₂/MWh. The factor assumes that heat generation parameters (fuel efficiency) are not changed by the introduction of combined generation. The reserve will reflect government policies encouraging high efficient combined generation.

In order to receive allowances from this reserve the operator of the installation should prove that the new cogeneration is high efficient in compliance with the Directive 2004/8/EC and Regulation №13/27.08.2004 of the Ministry of Energy and Energy Resources. In case of non-compliance of a new cogeneration installation to the requirements for high efficient cogeneration, the general allocation rules for new entrant apply

The size of R_{CG2} is equal to the heat generation emissions from cogenerators which are new entrants into the Scheme, having transformed a heat generator of below 20MW thermal capacity into a cogenerator of above 20MW thermal capacity. The reserve will be neutral to the country's total emission amount. It will increase the quantity of allowances in the combined generation sector available to new entrants and will reduce by the same amount the emissions from non-participating installations.

The size of these two reserves depends on the country's targets regarding the introduction of new highly efficient combined generation. Given a target of 18.0 per cent, the reserve is calculated by applying the emission factor of 0.35 t CO₂/MWh to the difference between the projected and the targeted electricity output. The quantity of allowances for heat generators of below 20 MW capacity prior to entry into the Scheme, has been set at 20.0 % of the allowances available for electricity generation..

Table 22. Reserve based on Targeted New High-Efficiency Cogeneration

Years	2007	2008	2009	2010	2011	2012
Target (18.0%, GWh)	6 733.80	6 895.80	7 043.40	7 295.40	7 570.80	7 765.20
Projected output (GWh)	5 800	5 772	5 835	6 080	6 123	5 411
Expected annual increase (GWh)	187	450	846	1 215	1 448	2 354
Electricity allowances (number)	61 631	148 381	279 146	400 977	477 850	776 877
Allowances, heat below 20 MW (number)	12 326	29 676	55 829	80 195	95 570	155 375
Total allowances for new unknown cogeneration (number)	73 957	178 057	334 975	481 172	573 420	932 252

Any annual remainder of this reserve will be transferred annually to the new entrants reserve

When this reserve is depleted the next new entrants do not receive free allowances.

Set Off quantity of allowances for cancellation in order to compensate ERU's transferred to other countries from JI projects

Allowances from this set off shall be cancelled at the transfer of ERU's from JI projects. This should allow to avoid the indirect double counting of ERU's. This quantity is a sum from the following elements:

- Approved JI projects: The total amount of ERU's having indirect effect, which quantity is determined in the validated PDDs (electricity production from RES, combined generation and energy efficiency)
- Endorsed JI projects, having indirect effect: 90% of the total quantity ERU's applied for
- New JI projects limit, having indirect effect: the limit is approved by the Bulgarian government as an admissible for this type of projects amount of ERU's

The approved target for RES is 11% and for combined generation is 18 %, stipulating that only half of the targeted electricity production levels from RES and combined generation shall be achieved through new JI projects. The new capacities needed for achieving the target are

increasing during the period 2007 – 2010 from 20 % to 100 %. The projection for end-consumption envisages that 2 % energy consumption decrease shall be achieved through new JI projects. The energy consumption levels are increasing during the years from 40 % to 100 %. Under these conditions, Table 23 provides the information about the set off allowances (the limits) for this type of projects, having indirect effect. After reaching the threshold of these limits, endorsement and approval of JI projects shall be stopped. The allowances for combined generation and RES are deducted from the energy sector.

Table 23. Allowances set off – JI projects having indirect effect:

Years	2008	2009	2010	2011	2012
1 Target RES 11%, GWh	4 214	4 304	4 458	4 627	4 745
2 Production, GWh	2 723	2 839	2 957	3 113	3 310
3 Necessary Increase, GWh	597	1 026	1 502	1 514	1 436
4 Allowances for JI - 50% new RES x 1,1t/MWh	328 108	564 218	825 825	832 590	789 580
5 Target combined generation 18%, GWh	6 895,80	7 043,40	7 295,40	7 570,80	7 765,20
6 Production, GWh	5 772	5 835	6 080	6 123	5 411
7 Necessary Increase, GWh	450	846	1 215	1 448	2 354
8 Allowances for JI - 50% new co-gen..x 0,7t/MWh	179 856	338 359	486 033	579 212	941 670
9 JI projects for energy efficiency (2%), GWh	766	783	811	841	863
10 Allowances for JI energy efficiency projects at 1,1 kg/kWh, (number)	597 636	813 904	1 053 780	1 093 560	1 121 640
11 Total for new projects with indirect effect(number)	1 105 600	1 716 481	2 365 638	2 505 362	2 852 890

The figures provided in Table 24, represent the verified or planned quantities for JI projects up to date. These quantities are accounted during the projection process concerning electricity production and electricity consumption in Bulgaria.

Table 24. Allowances set off – approved, endorsed and new JI projects having indirect effect:

Година	2008	2009	2010	2011	2012
Approved ERU's, (number)	1 238 897	1 259 305	1 278 048	1 310 825	1 350 728
Endorsed ERU's, (number)	678 243	678 243	678 243	678 243	678 243
New projects with indirect effect (number)	1 105 600	1 716 481	2 365 638	2 505 362	2 852 890
Total allowances set off, (number)	3 022 740	3 654 029	4 321 929	4 494 430	4 881 861

Set Off quantity of allowances for cancellation in order to compensate ERU's transferred to other countries from JI projects, is shown at the last row in Table 24.

When transferring ERU's from JI projects developed by installations that participate in the EU ETS and if the project falls within the terminological framework of direct double counting, then the relative amount of allowances is cancelled from the operator's account in the National Registry proportionally to the reduction amounts achieved by the installation through JI projects.

Planning Reserve for District Heating Companies in respect of Day-Degrees Standardisation (RDHcold)

The operators of installations which are district heating companies may apply for an adjustment of the allocation in respect of day-degrees standardisation if, in their service area, the

values of day-degrees during the base period (two highest-emission years between 2002 and 2004) were higher than average long-term values

Historical data suggest that, during the above period, average temperatures were higher than average long-term ones. As a result, the quantity of annual allowances to be allocated among heating companies has been increased by R_{DHcold} . The quantity has been calculated on the basis of numerical data provided by NIMH, MoEE, and SEWRC concerning district heating on a nationwide basis during the period. Average monthly temperatures during the period 2002-2003 were by 1.14°C higher than long-term averages. If temperatures during that period had been equal to long-term averages, the energy requirement for district heating would have been higher by 3.4 %. Therefore, this reserve has been set at 3.4 % of the emissions from district heating companies in 2003. The adjustment, at each installation, for each TJ of heat which would have been sold if temperatures had been equal to the long-term averages has been determined based on type of fuel and generation technology, as follows:

- Gas-fired heaters: 70 allowances
- Gas-fired cogenerations: 160 allowances
- Liquid fuel-fired heaters: 100 allowances
- Liquid fuel-fired cogenerations: 250 allowances
- Coal fired cogenerations: 500 allowances

In 2003 the total of district heating companies' CO₂ emissions amounted to 4 373 109 tonnes. Had winter temperatures in 2003 been normal, these companies would have emitted 148 686 tonnes more. Thus, the day-degrees standardisation reserve for 2008–2012 has been set at 892 116 tonnes of CO₂ or 148 686 tonnes per annum.

If the total adjustment applied by the installations exceeds the above reserve, individual requests will be adjusted proportionally to correspond to the reserve quantity. If the reserve is not fully used, the remainder will be cancelled.

MoEW will publish a sample form for adjustment applications. Operators will be invited to file applications upon the filing of verified reports with EAE.

Cold Reserve of Electricity Capacities

In accordance with the requirements of the European Electricity Transmission System (UCTE) Bulgaria's energy system should maintain in readiness 1 200 MW cold reserve of electricity capacities. The high amount of this reserve is determined by the highest installed singular electricity capacity in the country, that consists of 1000 MW .

In case of unscheduled outage electrical facilities, a period for restoring the work of the generating facility is needed..This requires the activation of capacities put in a cold reserve, which become operational in order to produce the insufficient amounts of energy. It is evaluated that this energy is equal to 1 000 000 allowances per year.

This situations are outside the regulation of article 29 to Directive 2003/87/EC since are not provoked by force majeure, but simply usual during exploitation of energy producing capacities. This cases are forecasted in the beginning of the period and cannot be considered as a risk of substantial increase of the annual greenhouse gas emissions.

Bulgaria will set aside in the National Registry an amount of 1 000 000 allowances as a reserve over the necessary reserve for the current year of the Kyoto Protocol obligation's period.

The Minister of Environment and Water shall issue permit for transferring part of these allowances in the accounts of the installation's operators that have produced the insufficient amount of energy. The necessity to use part of the projected allowances for every particular case shall be reasoned by the operator of the electricity system and consequently approved by the Minister of economy and Energy.

Annual verification of the amounts of allowances to particular installations

The “Emission Trading Permits” Department of the Executive Agency for Environment (EAE) makes the final verification of the data provided by the operators of installations for determining the amounts of allowances and confirms these amounts before transferring the allowances on the account of the installation in the National Registry. This department also calculates the amount of allowances from the particular reserves when allocating among the participants after the approval of this plan

In case of introduction of any changes to the volume of allowances, the allowances are allocated to the participants in the National Registry after being approved by the Minister of Environment and Water.

The reasons for reduction of the annual volume of allowances to be allocated in comparison with the figures in the plan are as follows:

- When an installation is being limited in production volume by an IPPC permit or other decision of the authorised Body due to environmental protection reasons, the number of allowances that corresponds to the reduction of production volume is not allocated to the installation for the years following the year of introduction of the limitation of the production. The original allocation of allowances is restored from the moment of the cancellation of the limitation of the production volume. The volume of non allocated allowances is transferred to the new entrants reserve.
- When inaccuracies in input data provided by the installations or inaccurate application of the methodology for allowance allocation is determined and if in result the installation has received more allowances, EAE corrects the amount and proposes it to the MOEW to issue the reduced amount of allowances to the installation’s account while the leftover is transferred to new entrants reserve.

If such reasons do not occur, the correspondent EAE Department proposes to MOEW to transfer in the installation’s account the amount of allowances determined in the plan.

For the registered working installations which receive permits within the determined deadline, these allowances are registered after EC approval of the plan.

Allocation and issuing of allowances to the late installations and known and unknown new entrants

The “Emission Trading Permits” Department of the EAE determines the allowances for working installations, late after 28.02.2006, which have obtained permit when the operators have submitted the necessary data for calculation of the allowances, following the affirmed format.

The final amount of allowances for non-working NBYI and known new entrants is determined by EAE within 10 days after receiving an official letter from the owner or the operator of the installation notifying the starting or restarting of the installation exploitation. The amount is approved by the MOEW in the next 20 days and transferred to the installation’s account within 35 days after receiving the letter.

Within this term, EAE may verify the accuracy of the submitted information and if the data is not up-to-date or reliable it may stop the process of allocation of the allowances. The installations from this group cannot start to operate without receiving emissions permit.

The allowances for an unknown new entrant are determined by the EAE and approved by the MOEW after submission of an application for permit. When the amount of the necessary

allowances is smaller than the available in the reserve then the applicant receives the leftover in the reserve and the next applicants do not receive free allowances.

If the unknown new entrants reserve is supplemented at a later stage (due to non-issued permits, late introduction of new installations or other reasons), then the new participant (participants) is additionally provided with the insufficient allowances regarding the order of receiving the applications.

The disputes on the EAE actions concerning the final verification of the allowances of a particular installation are within the competencies of the Minister of Environment and Water.

5.2.3. Is any information available concerning the expected number of new entrants (from land purchase applications, building permits, environmental permits, etc.)? Are there any new or updated emissions permits to operators still under construction but expected to become operational during the 2007–2008 period?

Planned new entrants information was gathered by IWG, using the following sources:

- MoEW and its dependent units:
 - JI projects supported or approved at the time of NAP preparation and envisaging new capacities, as well as the expansion of existing installations
 - RIEWs: types and capacities of existing undertakings in their respective areas
 - MoEW's Prevention Directorate: undertakings under construction
 - EAE: applications for IPPC permits pending
- MoEE: sector forecasts for the energy sector and the industrial sectors
- MoRDPW
 - Industry associations, regarding any new installations

For precise data concerning new entrants see Table 21 under Section 5.2.2 (above)

5.3. Other Legislative and Political Instruments

5.3.1. Please list the Community legislative or policy instruments taken into account in the preparation of NAP and explain the impact of each on the allocation of allowances and concerning which activities.

5.3.2. Has in particular any new Community legislation been taken into account resulting in an inevitable emissions increase? If so, explain the manner in which the change in emissions has been taken into account as inevitable.

1. Directive 2003/17/EC of the European Parliament and of the Council amending Directive 98/70/EC relating to the quality of petrol and diesel fuels

The Directive calls for the manufacture of low sulphur-content fuels. The result is an increase of carbon dioxide emissions from installations covered by the Emissions Trading Directive. However, the emission increases from such installations is accompanied with emission reductions in the transport sector **Council Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations**

The Directive introduces VOC emission limits on installations carrying on certain industrial activities subject to a comprehensive permit and GHG emissions permit requirement Thermal processing is one of the main methods used to reduce VOC emissions, requiring considerable

amounts of energy. This would in turn result in higher carbon dioxide emissions which has been taken into account by the NAP planning reserve for compulsory measures.

2. Directive 2001/80/EC of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from large combustion plants

The compulsory measures ensuing from this Directive also result in an inevitable increase of carbon dioxide emissions, which has been taken into account by the NAP planning reserve for compulsory measures.

3. Council Directive 96/61/EC concerning integrated pollution prevention and control

The comprehensive permit required under this Directive is a private administrative instrument permitting the operation of a certain installation, or a part of it, under certain conditions ensuring the installation's compliance with the relevant legal requirements. Comprehensive permits govern the operation of all installations included in the emissions trading scheme, with the exception of combustion plants of 20–50 MW thermal capacity. Such permits are also relevant to the GHG emissions permitting procedure, which is of the nature of operational permitting with respect to the installations covered by Annex I of Directive 2003/87/EC. Until such time as emissions permits begin to be allocated to the installations covered by the two Directives, those installations should already have been provided with integrated permits and be in compliance with the measures therein set out. Some of these measures have a direct impact on GHG emission levels from the installations concerned.

4. Directive 2004/8/EC of the European Parliament and of the Council on the promotion of cogeneration based on a useful heat demand in the internal energy market

BNAP provides sufficient reserves for new cogeneration and for JI projects to build cogeneration capacities.

5. Directive 2001/77/EC of the European Parliament and of the Council on the promotion of electricity produced from renewable energy sources in the internal electricity market

BNAP has a set-aside for JI projects for the production of electricity from RES.

6. Public Consultation

6.1. In what manner has this NAP been made accessible to the public?

6.2. How has the Member State ensured that comments from the public are taken into account before the allocation decision if made?

6.3. If any comments from the public received during the first round of consultation have had a significant effect on the NAP, the Member State must provide a summary of these and explain the manner in which they have been taken into account.

6.1 The business community has participated in the BNAP preparation process through its industry representatives in IWG who advocated the interest of operators covered by the Directive.

The information relating to the preparation of BNAP was made available to the public by:

- Communication campaigns run by MoRDPW and MoEE
- Seminars organised by BIA, BIBA, and other NGOs
- Workshops and seminars in the framework of the Dutch project
- Publications in the mass media
- The websites of MoEW, MoEE, and MoRDPW

Media coverage of the successive stages in the BNAP preparation process has presented a constant platform for informing the large public and promoting public debate on the subject. The relevant section, constantly updated, of MoEW's website provides information to all stakeholders.

6.2 Following the publication of BNAP, all parties concerned have had the opportunity to present their comments in writing through the MoEW website. The comments are summarised by the Ministry and presented to IWG for consideration.

6.3 The Intergovernmental Working Group deliberates on all proposals and makes reasoned decisions on them; and the results of these deliberations are taken down for the record. The process is supported by Dutch and Bulgarian consultants of international experience in the field of climate change. IWG will apply the same procedure to the comments from the public received in the public consultation process.

7. Criteria Other than Those under Annex III of the Directive

7.1 Have any criteria been applied in NAP other than the criteria under Annex III of the Directive? If so, please state and explain the manner in which they have been applied.

Please also explain why these other criteria have been deemed non-discriminatory.

Bulgaria has not applied any criterias other than the ones under Annex III of the Directive.

List of Installations covered by Directive 2003/87/EC and proposed allowances allocation for the period 2008 - 2012

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
I. Energy transformation - electricity										
Registered installations										
1	2	ENERGIJNA KOMPANIA MARICA IZTOK III	Energijna kompania Marica iztok III AD	Galabovo	Mednikarovo village	5,773,187	5,977,356	6,308,510	6,236,811	6,050,460
2	11	TPP MARICA-IZTOK 2 EAD	TPP "Marica Iztok 2" EAD	Radnevo	Kovacevo village	9,364,829	10,130,077	11,238,804	11,238,804	11,238,804
3	36	TPP VARNA EAD	TPP Varna EAD	Beloslav	Ezerovo village	2,759,673	2,827,568	2,996,393	2,959,840	2,864,837
4	7	TPP MARICA 3 AD	TPP "Marica 3" AD	Dimitrovgrad	Dimitrovgrad	345,528	345,528	345,528	345,528	345,528
Total						18,243,217	19,280,530	20,889,235	20,780,983	20,499,629
Known new entrant										
5	7	TPP MARICA 3 AD	TPP "Marica 3" AD	Dimitrovgrad	Dimitrovgrad	584,723	584,723	584,723	584,723	584,723
6	1008	AES-3C MARICA-IZTOK 1 EOOD				783,743	2,940,115	5,650,230	5,650,230	5,650,230
Total						1,368,466	3,524,838	6,234,953	6,234,953	6,234,953
NBYI Known Installations										
7	9-36	TPP VARNA EAD	TPP Varna EAD	Beloslav	Ezerovo village	1,860,873	1,860,873	1,860,873	1,860,873	1,860,873
8	16	TPP BOBOVDOL EAD	TPP Bobov dol - EAD	Bobov dol	Golemo selo village	2,062,238	2,062,238	2,062,238	2,062,238	1,031,119
9	9-27	TPP RUSE IZTOK - condensational	DHC - Ruse EAD	Ruse	Ruse	641,732	641,732	1,170,463	1,170,463	1,170,463
Total						4,564,843	4,564,843	5,093,574	5,093,574	4,062,455
Compulsory Measures										
10	1	NPP Kozlodui	NPP Kozlodui EAD	Kozlodui	Kozlodui	1,483	1,483	1,483	1,483	1,483

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
11	2	ENERGIJNA KOMPANIA MARICA IZTOK III	Energijna kompania Marica iztok III AD	Galabovo	Mednikarovo village	230,927	239,094	252,340	249,472	242,018
12	11	TPP MARICA-IZTOK 2 EAD	TPP "Marica Iztok 2" EAD	Radnevo	Kovacevo village	374,593	405,203	449,552	449,552	449,552
Total						607,004	645,781	703,376	700,508	693,054
Total for sector						24,783,530	28,015,991	32,921,137	32,810,018	31,490,091
I. Energy transformation - combined heat and power										
Registered instalations										
13	118	BIOVET AD - Razgrad	Biovet AD - klon Razgrad	Razgrad	Razgrad	47,829	43,531	46,343	46,921	40,767
14	124	BRIKEL EAD	BRIKEL EAD	Galabovo	Galabovo	2,148,000	2,148,000	2,148,000	2,148,000	NA
15	42	KAMIBO EOOD	Kamelia Boianova Shushkova	Vraca	Vraca	23,551	21,435	22,820	23,104	20,074
16	37	TPP DEVEN AD	"DEVEN" AD	Devnia	Devnia	1,731,532	1,870,741	1,870,741	1,870,741	1,870,741
17	14	TPP VIDAHIM	Vidahim AD	Vidin	Vidin	587,209	587,209	587,209	587,209	587,209
18	3	TPP Plovdiv sever	Eng. Mirko Cvetanov Ugrinov	Plovdiv	Plovdiv	134,639	135,493	135,493	135,493	135,493
19	35	TPP ZAHARNI ZAVODI AD	Eng. Rumel Ivanov- Executive Director	Gorna Oriahovica	Gorna Oriahovica	141,483	130,745	139,192	140,926	122,445
20	27	TPP RUSE IZTOK cogeneration	DHC - Ruse EAD	Ruse	Ruse	680,224	679,614	679,614	679,614	679,614
21	33	TPP SVILOZA	Executive Director - Eng. L. Stamatov	Svishtov	Svishtov	727,086	727,086	727,086	727,086	727,086
22	15	DHC - PERNIK EAD - TPP Republika	DHC - Pernik EAD	Pernishka	Pernik	1,079,192	1,079,192	1,079,192	1,079,192	1,079,192
23	12	DHC Sliven EAD	DHC Sliven EAD	Sliven	Sliven	211,924	213,406	214,888	217,111	219,334
24	18	DHC SOFIA AD - TPP Sofia	DHC Sofia AD	Stolica district Serdika	Sofia	457,190	467,019	477,064	487,335	497,828
25	17	DHC SOFIA AD - TPP Sofia Iztok	DHC Sofia AD	Stolica district Iskar	Sofia	773,574	788,707	804,135	819,866	835,867

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
26	38	DHC VARNA EAD, TP Varnencik	DHC Varna	Varna	Varna	32,381	31,345	33,370	33,437	29,355
27	40	DHC VRACA TP	DHC - Vraca EAD	Vraca	Vraca	13,364	13,718	13,773	13,773	13,773
28	32	DHC GABROVO	DHC - Gabrovo EAD	Gabrovo	Gabrovo	46,564	57,878	61,618	62,385	54,204
29	13	DHC KAZANLAK	DHC Kazanlak EAD	Kazanlak	Kazanlak	49,003	49,034	49,507	49,034	49,507
30	30	DHC PLEVEN EAD	DHC Pleven EAD	PLEVEN	Pleven	145,203	149,025	149,947	150,210	150,210
31	6	DHC SHUMEN EAD	DHC Shumen EAD	Shumen	Shumen	49,325	44,892	47,793	48,388	42,043
32	44	DHC JAMBOL EAD	Eng. Stoian Malinov Slavov	Jambol	Jambol	1,243	1,131	1,204	1,219	1,059
33	85	TP BIOVET AD	Biovet AD	Peshtera	Peshtera	56,541	51,460	54,785	55,467	48,193
Total						9,137,058	9,290,662	9,343,774	9,376,512	7,203,998
Late installations										
Total						0	0	0	0	0
Known New entrants										
34	9-40	DHC VRACA TP City	DHC - Vraca EAD	Vraca	Vraca	18,144	18,144	18,144	18,144	18,144
35	9-30	DHC PLEVEN EAD	DHC Pleven EAD	Pleven	Pleven	81,550	81,550	81,550	81,550	81,550
36	9-44	DHC JAMBOL EAD	Eng. Stoian Malinov Slavov	Jambol	Jambol	8,400	8,400	8,400	8,400	8,400
37	9-85	TP BIOVET AD	Biovet AD	Peshtera	Peshtera	133,000	133,000	133,000	133,000	133,000
38	9-5	DHC - BURGAS	DHC - BURGAS EAD	Burgas	Burgas	44,685	44,685	44,685	44,685	44,685
39	9-31	DHC VT AD	DHC VT AD VELIKO TARNOVO	Veliko Tarnovo	Veliko Tarnovo	13,090	13,090	13,090	13,090	13,090

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
40	9-18	DHC SOFIA AD - TPP Sofia	DHC Sofia AD	Stolica district Serdika	Sofia	NA	NA	66,000	66,000	66,000
Total						298,869	298,869	364,869	364,869	364,869
NBYI Known Installations										
41	9-15	DHC - PERNIK EAD - TPP Republika	DHC - Pernik EAD	Pernishka	Pernik	154,016	154,016	154,016	154,016	154,016
Total						154,016	154,016	154,016	154,016	154,016
Total for the sector						9,589,942	9,743,547	9,862,658	9,895,396	7,722,882
I. Energy transformation - -heating – public sector										
Registered instalations										
42	4	TP Plovdiv - South	Eng. Mirko Tzvetanov Ugrinov	Plovdiv	Plovdiv	32,360	33,588	34,669	35,818	36,960
43	21	DHC SOFIA AD - TP Ingstroj	DHC Sofia AD	Stolica district Ilinden	Sofia	7,436	7,719	7,967	8,231	8,493
44	25	DHC SOFIA AD - TP Ovcha kupel 1	DHC Sofia AD	Stolica district Ovcha kupel	Sofia	17,862	18,540	19,137	19,771	20,401
45	26	DHC SOFIA AD - TP Ovcha kupel 2	DHC Sofia AD	Stolica district Ovcha kupel	Sofia	21,928	22,760	23,493	24,271	25,045
46	23	DHC SOFIA AD - TP Suha reka	DHC Sofia AD	Stolica district Poduene	Sofia	18,213	18,904	19,513	20,159	20,802
47	22	DHC SOFIA AD - TP H. Dimitar	DHC Sofia AD	Stolica district Poduene	Sofia	37,419	38,838	40,089	41,417	42,738
48	20	DHC SOFIA AD - TP Zemlene	DHC Sofia AD	Stolica district Krasno selo	Sofia	271,453	281,750	290,825	300,458	310,038
49	19	DHC SOFIA AD - TP Liulin	DHC Sofia AD	Stolica district Vrabnitza	Sofia	193,845	201,198	207,679	214,558	221,398

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
50	24	DHC SOFIA AD - TP Levski - G	DHC Sofia AD	Stolichna district Poduene	Sofia	18,168	18,857	19,465	20,110	20,751
51	5	DHC BURGAS	DHC Burgas EAD	Burgas	Burgas	80,686	83,747	86,444	89,307	92,155
52	39	DHC VRATZA - TP Mladost	DHC - Vraca EAD	Vratza	Vraca	27,112	28,140	29,047	30,009	30,966
53	31	DHC VT AD	DHC VT AD VELIKO TARNOVO	Veliko Tarnovo	Veliko Tarnovo	34,372	35,676	36,825	38,045	39,258
54	46	DHC RAZGRAD	DHC RAZGRAD EAD	Razgrad	Razgrad	10,744	11,151	11,510	11,892	12,271
Total						771,599	800,869	826,664	854,045	881,275
Late Installations										
Total										
Known New entrants										
Total										
NBYI Known Installations										
Total										
Total for the sector						771,599	800,869	826,664	854,045	881,275
I. Energy transformation - heating for industrial purposes and other CP										
Registered instalations										
55	34	AGROPOLIHIM AD	AGROPOLIHIM AD	Devnia	Devnia	282,535	282,535	282,535	282,535	282,535
56	111	ALKOMET	ALKOMET AD	Shumen	Shumen	26,588	29,246	32,171	35,395	38,934
57	263	AMILUM BULGARIA EAD	Svetlozar Petrov Karadgov	Razgrad	Razgrad	60,551	60,551	60,551	60,551	60,551
58	80	ARSENAL AD	Arsenal AD	Kazanlak	Kazanlak	38,588	38,588	38,588	38,588	38,588
59	261	ASENOVA KREPOST AD				3,193	3,225	3,378	3,531	3,841
60	78	BISER OLIVA AD	BISER OLIVA AD	Stara Zagora	Stara Zagora	2,173	2,173	2,173	2,173	2,173

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
61	259	BULKOM PLJUS	Bulkom Pljus EOOD	Karlovo	Bania	9,795	17,462	24,971	32,345	38,119
62	115	BADESHTNOST AD	ZAPRIAN JAKIMOV		CIRPAN	6,790	6,790	6,790	6,790	6,790
63	104	VMZ EAD	VMZ EAD	Sopot	Sopot	20,141	20,742	21,344	21,945	22,546
64	105	VMZ EAD Ignatovo	VMZ EAD	Karlovo	Ignatovo village	11,681	12,280	12,879	13,478	14,077
65	100	GARD INVEST	Rangel Stoianov Berberov	Rakovski	Rakovski	7,561	7,937	8,313	8,689	9,065
66	279	DARVOOBRABOTVANE VT AD	Darvoobrabotvane VT AD	Veliko Tarnovo	Veliko Tarnovo	4,374	4,374	4,374	4,374	4,374
67	76	ZAGORA FRUKT AD	Zagora Frukt Ad	Stara Zagora	Stara Zagora	1,743	1,763	1,783	1,783	1,783
68	75	ZAGORKA AD	Zagorka AD	Stara Zagora	Stara Zagora	12,514	12,514	12,514	12,514	12,514
69	260	ZAHAREN KOMBINAT KRISTAL AD	Zaharen Kombinat Kristal AD	Plovdiv	Plovdiv	44,814	44,814	49,293	49,293	49,293
70	70	KALIAKRA AD	Kaliakra AD	Dobric	Dobric	6,469	6,469	6,469	6,469	6,469
71	125	KRONOSHPAN BULGARIA EOOD	Kronoshpan Bulgaria EOOD	Burgas	Burgas	33,098	34,071	35,045	36,018	36,992
72	285	KCM AD	KCM AD Plovdiv	Kuklen	Plovdiv	25,507	25,507	25,507	25,507	25,507
73	99	MARICATEKS	MARICATEKS AD	PLOVDIV	PLOVDIV	9,591	9,591	9,591	9,591	9,591
74	282	MASHSTROI	Eng. Minko Angelov Taslakov	TROIAN	TROIAN	1,747	1,776	2,091	2,291	2,520
75	73	MBAL PROF DR ST KIRKOVIC	MBAL Prof Dr St Kirkovic AD	Stara Zagora	Stara Zagora	4,094	4,094	4,094	4,094	4,094
76	271	MEKOM AD	MEKOM AD	Silistra	Silistra	5,607	8,410	11,213	14,017	14,577
77	74	MIROLIO BULGARIA EOOD	Eng. Ivan Dinev Procurator	Sliven	Sliven	19,246	20,259	21,272	22,285	23,297
78	84	OLOVNO CINKOV KOMPLEKS AD	Eng. Nikola Pashinov	Kargali	Kargali	25,994	25,994	25,994	25,994	25,994
79	9	TP BALKAN FARMA-DUPNICNA AD	Balkanfarma Dupnica AD	Dupnica	Dupnica	15,811	15,811	15,811	15,811	15,811
80	112	PROMET STIIL	Promet stiil AD Burgas	Sredec	Sofia, 1 Dobruga Str.	40,525	42,754	44,983	44,983	44,983
81	210	FAZERLES AD	FASERLES AD	Silistrenska	Silistra	28,558	28,558	28,558	28,558	28,558
82	277	HRANINVEST HRANMASHKOMPLEKT AD	Todor Zafirov	Stara Zagora	Stara Zagora	2,015	3,022	3,022	3,022	3,022

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
83	10	JUMIKOR MED AD	Jumikor Med AD	PIRDOP	PIRDOP	55,484	55,484	55,484	55,484	55,484
Total						806,787	826,795	850,790	868,109	882,084
Late Installations										
84	122	BULGARGAS EAD KS Perich	Eng. Nikola Filchev	Petrich	Rupite village	35,053	35,053	32,471	51,458	51,948
85	123	BULGARGAS EAD-district Ciren	Eng. Vanio Slaveikov	Vraca	Ciren village	7,168	9,216	8,616	11,263	11,263
86	110	BULGARGAS EAD KS Kardam 1	Eng. Stoian Enchev Dimitrov	General Toshevo	Kardam village, region Dobrich	4,678	4,692	3,749	5,942	5,998
87	121	BULGARGAS EAD district Ihtiman, KS Ihtiman	Ljuben Kacarski	Ihtiman	Stambolovo village	34,084	34,180	27,316	43,288	43,700
88	119	BULGARGAS EAD district Stara Zagora KS Lozenec	Eng. Mitko Parushev Mitev	Stralga	Lozenec village	98,955	98,955	92,248	122,495	122,495
89	120	BULGARGAS EAD district Stara Zagora KS Stranga	Eng. Petko Markov Georgiev	Boliarovo	Gorska Poliana village	78,995	78,995	78,995	78,995	78,995
90	117	BULGARGAS EAD district Valci dol KS Kardam 2	Eng. Stoian Enchev Dimitrov	General Toshevo	Kardam vllage	75,601	75,601	76,001	94,001	94,001
91	109	BULGARGAS EAD district Valci dol KS Provadia	Eng. Zvezdelin Marinov Zlatev	Provadia	Krivnia village	101,597	101,597	87,890	126,080	126,080
92	288	Mezdrateks EOOD	Mezdrateks EOOD	Mezdra	Mezdra	6,164	7,284	8,406	9,526	10,460
93	202	LESOPLAST AD	Eng. Boris Dragomirov Simeonov	Troian	Troian	21,375	21,752	22,129	22,506	22,883
Total						463,670	467,324	437,823	565,555	567,824
Known new entrants										
Total										
NBYI Known Installations										
94	58	CHUGUNENA ARMATURA BULGARIA AD	Mariana Georgieva Sotirova	Vratza	Vratza	3,763	4,077	4,077	4,077	4,077
95	9-76	ZAGORA FRUKT AD	Zagora Frukt AD	Stara Zagora	Stara Zagora	1,016	1,248	1,337	1,604	1,783

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
Total						4,779	5,325	5,414	5,681	5,860
Total for the sector						1,275,236	1,299,444	1,294,027	1,439,345	1,455,767
II. Mineral oil refineries										
Registered instalations										
96	128	LUKOIL NEFTOHIM BURGAS AD	Lukoil Neftohim Burgas AD	Burgas	Burgas	4,200,552	4,452,585	4,573,727	4,581,713	4,581,713
Total						4,200,552	4,452,585	4,573,727	4,581,713	4,581,713
Late Installations										
Total										
Known New entrants										
97	9-128	LUKOIL NEFTOHIM BURGAS AD	Lukoil Neftohim Burgas AD	Burgas	Burgas	252,078	413,289	413,289	471,378	471,378
Total						252,078	413,289	413,289	471,378	471,378
NBYI Known Installations										
Total						0	0	0	0	0
Total for the sector						4,452,630	4,865,875	4,987,016	5,053,092	5,053,092
III. Ferrous metallurgy										
Registered instalations										
98	131	KREMIKOVCI AD	Eng. Valentin Kirilov Zahariev	Sofia	Sofia	5,438,873	5,490,735	5,544,660	5,601,628	5,646,799
99	281	PROGRES AD	PROGRES AD	Stara Zagora	Stara Zagora	3,366	3,398	3,431	3,467	3,495
100	273	RADOMIR METALI AD	RADOMIR METALI AD	Radomir	Radomir	41,180	41,572	41,981	42,412	42,754
101	215	REMOTEKS RADNEVO EAD	Remoteks Radnevo EAD	Radnevo	Radnevo	5,327	5,327	5,327	5,327	5,327
102	132	STOMANA INDUSTRY AD	STOMANA INDUSTRY AD	Pernik	Pernik	375,193	483,059	483,059	483,059	483,059

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
Total						5,863,939	6,024,091	6,078,458	6,135,892	6,181,434
Late installations										
103	274	CHUGUNOLEENE AD Ihtiman	Chugunoleene AD	Ihtiman	Ihtiman	3,543	3,577	3,612	3,649	3,679
Total						3,543	3,577	3,612	3,649	3,679
Known New entrants										
104	9-132	STOMANA INDUSTRY AD	STOMANA INDUSTRY AD	Pernik	Pernik	151,517	151,517	151,517	151,517	151,517
Total						151,517	151,517	151,517	151,517	151,517
NBYI Known Installations										
105	291	METAL BG	Metal BG OOD	Plovdiv	Plovdiv	14,863	15,121	15,509	15,509	15,509
106	9-275	SOLIDUS	Solidus OOD	Pernik	Pernik	536	612	677	753	894
Total						15,399	15,733	16,186	16,262	16,403
Total for the sector						6,034,398	6,194,918	6,249,774	6,307,320	6,353,033
IV. Cement production										
Registered instalations										
107	135	VULKAN	Atila Ialdaz	Dimitrovgrad	Dimitrovgrad, Vulkan	367,692	367,692	344,711	344,711	344,711
108	136	DEVNIA CEMENT AD	Devnia cement AD	Devnia	Devnia	1,646,190	1,646,190	514,434	514,434	514,434
109	138	ZLATNA PANEGA CEMENT AD	Zlatna Panega Cement AD	Lovech	Zlatna panega village	512,921	512,921	512,921	512,921	512,921
110	137	HOLCIM Bulgaria AD- Pleven	Holsim Bulgaria AD	Pleven	Pleven	240,613	240,613	240,613	240,613	240,613
111	134	HOLCIM Bulgaria AD- Vratsa	Holsim Bulgaria AD	Vratsa	Beli Izvor	542,135	542,135	542,135	542,135	542,135
Total						3,309,550	3,309,550	2,154,814	2,154,814	2,154,814
Late installations										
Total						0	0	0	0	0
Known New entrants										

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
112	9-134	HOLCIM Bulgaria AD- Pleven	Holsim Bulgaria AD	Vratza	Beli Izvor	373,024	373,024	373,024	373,024	373,024
113	10-134	HOLCIM Bulgaria AD- Vratsa	Holsim Bulgaria AD	Vratza	Beli Izvor	155,427	155,427	155,427	155,427	155,427
114	10-136	DEVNIA CEMENT AD New 7	Devnia cement AD	Devnia	Devnia	NA	136,264	1,907,701	1,907,701	1,907,701
115	9-136	DEVNIA CEMENT AD New 8	Devnia cement AD	Devnia	Devnia	NA	NA	425,826	425,826	425,826
Total						528,450	664,715	2,861,978	2,861,978	2,861,978
NBYI Known Installations										
116	9-135	VULKAN	Atila Ialdaz	Dimitrovgrda	Dimitrovgrad Vulkan	250,874	250,874	NA	NA	NA
117	9-138	ZLATNA PANEGA CEMENT AD	Zlatna Panega Cement AD	Lovech	Zlatna Panega	587,046	587,046	587,046	587,046	587,046
118	10-138	ZLATNA PANEGA CEMENT AD	Zlatna Panega Cement AD	Lovech	Zlatna Panega	NA	NA	864,427	864,427	864,427
Total						837,921	837,921	1,451,473	1,451,473	1,451,473
Total for the sector						4,675,921	4,812,185	6,468,265	6,468,265	6,468,265
V. Lime production										
Registered instalations										
119	189	VARODOBIV	Varodobiv EOOD Shumen	Shumen	Troica village	20,033	22,537	22,537	22,537	22,537
120	193	VARHIM	Varhim EOOD Mezdra	Mezdra	Cerepish	21,334	21,981	22,239	22,627	23,274
121	144	KALCIT	Kalcit AD	Asenovgrad	Asenovgrad	69,891	69,891	69,891	69,891	69,891
122	142	KARIERI I VARODOBIV	Karieri i varodobiv AD	Zemen	Zemen	23,144	23,144	23,144	23,144	23,144
123	253	OGNIANOVO K VAROV ZAVOD OGNIANOVO	Ognianovo K AD Varov Zavod Ogninovo	Pazardjik	Ognianovo	151,559	151,559	168,399	168,399	168,399
124	254	OGNAINOVO K ZNHV PUKLINA	Ognianovo KAD ZNHV Puklina	Slivnitza and Dragoman	Uninhabited area	83,570	88,414	88,414	88,414	88,414

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
Total						369,530	377,525	394,624	395,012	395,658
Late installations										
Total						0	0	0	0	0
Known new entrants										
Total						0	0	0	0	0
NBYI Known Installations										
125	9-143	BULVARKO OOD	BULVARKO EOOD	Pernik	Pernik	155,463	155,463	155,463	155,463	155,463
126	9-144	KALCIT	Kalcit AD	Asenovgrad	Asenovgrad	69,891	69,891	69,891	69,891	69,891
Total						225,354	225,354	225,354	225,354	225,354
Total for the sector						594,884	602,879	619,977	620,365	621,012
VI. Производство на стъкло										
Registered Installations										
127	149	DRUJBA STAKLARSKI ZAVODI AD Plovdiv	Drujba Staklarski Zavodi AD	Serdika	Sofia	114,112	115,176	116,147	117,040	118,616
128	145	DRUJBA STAKLARSKI ZAVODI AD Sofia	Drujba Staklarski Zavodi AD	Serdika	Sofia	55,236	55,236	55,236	55,236	55,236
129	150	INTERIOR GLAS	Interior Glas OOD	Elena	Elena	15,735	15,881	16,015	16,138	16,356
130	147	SZ RUBIN AD	Rubin AD Pleven	Pleven	Pleven	74,372	75,066	75,698	76,281	77,308
Total						259,456	261,359	263,097	264,695	267,515
Late Installations										
Total						0	0	0	0	0
Known New entrants										
131	9-146	NOVO STAKLO EAD		Serdika	Novi Pazar	17,838	17,838	17,838	17,838	17,838
132	9-148	TRAKIA GLAS Bulgaria	Ulukan Ijljun	Targovishte	Targovishte	158,686	158,686	158,686	158,686	158,686

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
133	10-148	TRAKIA GLAS Bulgaria New 1	Ulukan Ijljun	Targovishte	Targovishte	38,009	38,009	38,009	38,009	38,009
134	11-148	TRAKIA GLAS Bulgaria New 2	Ulukan Ijljun	Targovishte	Targovishte	NA	128,635	128,635	128,635	128,635
135	12-148	TRAKIA GLAS Bulgaria New 3	Ulukan Ijljun	Targovishte	Targovishte	NA	NA	NA	38,009	38,009
Total						214,534	343,169	343,169	381,179	381,179
NBYI Known Installations										
136	9-150	INTERIOR GLAS	Interior Glas OOD	Elena	Elena	18,545	18,545	18,545	18,545	18,545
Total						18,545	18,545	18,545	18,545	18,545
Total for the sector						492,535	623,074	624,811	664,419	667,239
VII. Ceramics production										
Registered instalations										
137	167	BADESHTE BUTOVO	Badeshte Butovo AD	Pavlikeni	Butovo village	4,569	4,807	4,923	4,997	5,092
138	264	ELMAZ	Elmaz OOD	Lovec	Bahovica village	4,325	4,551	4,660	4,730	4,820
139	173	IDEAL STANDART BULGARIA AD	Ideal Standart Bulgaria	Gabrovo	Sevlievo	34,174	34,362	35,412	36,026	37,415
140	181	KERAM INVEST	Keram Invest AD	Sliven	Sliven	8,379	8,379	8,379	8,379	8,379
141	257	KERAMAT AD VETRISHTTE	Keramata AD	Shumen	Vetrishte	5,682	5,978	6,122	6,214	6,332
142	256	KERAMAT AD KASPICAN	Keramata AD	Kaspican	Kaspican	28,874	30,381	30,461	30,461	30,461
143	183	KERAMIKA 98	Keramika 98 OOD	Letnizaa	Letnizta	2,079	2,188	2,189	2,189	2,189
144	160	KERAMIKA BURGAS 2001 OOD	Keramika Burgas 2001 OOD	Burgas	Burgas	19,827	19,827	19,827	19,827	19,827
145	165	KERAMICEN ZAVOD DRAGOVISHTICA KERAMINGENERING	Eng. B. Angelov	Kjustendil	Dragovishtica	9,272	9,756	9,990	10,141	10,334

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
146	161	KERAMICNA KASHTA STRALGA EOOD	Zavod za keramichni produkti	Stralga	Stralga	8,803	9,263	9,485	9,628	9,811
147	196	KZ BAGRENCI	Kiril Pargov - Director	Kjustendil	Bagrenci village	10,862	11,428	11,702	11,879	12,105
148	166	MIZIA	Mizia 2000 OOD	Gorna Oriahovitca	Gorna Oriahovitca	7,000	7,365	7,542	7,655	7,801
149	185	RODNA INDUSTRIJA 91	Veselin Antonov Vasilev	Popovo	Popovo	1,664	1,665	1,665	1,665	1,665
150	177	SK-13 PLEVEN KAMENINA AD	SK-13 Pleven Kamenina AD	Pleven	Pleven	569	584	600	616	632
151	158	STROIKERAMIKA AD MEZDRA	Iordanka Todorova	Mezdra	Mezdra	13,979	14,709	14,867	14,867	14,867
152	269	STROIKERAMIKA AD MONTANA	Eng. Vencislav Dimitrov Georgiev	Montana	Montana	1,686	1,774	1,817	1,844	1,879
153	266	TERA AD	Dimitar Iotov dimitrov	Cerven Briag	Cerven Briag	3,182	3,182	3,182	3,182	3,182
154	198	TRUD AD	Vesela Diakova Akabalieva	Ruse	Ruse	6,457	6,492	6,690	6,806	7,069
155	180	HAN ASPARUH AD	Han Asparuh AD	Isperih	Isperih	48,964	56,938	58,679	59,696	59,844
156	262	SHAVARNA 97 OOD	Shavarna 97 OOD	Levski	Levski	2,507	2,507	2,507	2,562	2,616
157	284	SHAMOT AD	D-r Eng. Doncho Ivanov	Elin Pelin	Elin Pelin	10,118	10,624	11,155	11,689	12,140
Total						232,972	246,761	251,853	255,051	258,460
Late Installations										
158	289	ET MITKO GEKOV D	ET Mitko Gekov D	Dimitrovgrad	Nova Nadegda village	2,476	2,476	2,412	2,412	2,212
159	176	KERAMIK GT AD	Keramik GT AD	General Toshevo	General Toshevo	8,546	8,992	9,199	9,199	9,199
160	286	KERAMICEN ZAVOD DERMANCI	VTPG Konsult OOD	Lukovit	Dermanci	47,797	50,291	51,497	51,924	51,924
161	179	HAN OMURTAG	Han Omurtag AD	Shumen	Shumen	6,870	6,870	6,870	6,870	6,870

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
162	293	HARMANLIJSKA KERAMIKA	Eng. Angelina Dimitrova Perindeva	Harmanli	Harmanli	6,330	6,661	6,820	6,923	7,055
Total						72,020	75,290	76,798	77,328	77,261
Known New entrants										
163	9-152	TERRA 2000	Terra 2000 OOD Pleven	Lukovit	Lukovit	55,347	55,347	55,347	55,347	55,347
164	9-180	KHAN ASPARUH AD	Han Asparuh AD	Ispirih	Ispirih	41,532	51,281	51,281	51,281	51,281
165	9-179	KHAN OMURTAG AD	Han Omurtag AD	Shumen	Shumen	45,389	45,389	45,389	45,389	45,389
Total						142,269	152,017	152,017	152,017	152,017
NBYI Known Installations										
166	9-258	KERAMICEN ZAVOD Botevgrad	Kapriz 2 OOD	Sofia	Sofia	67	67	67	67	67
167	255	KERAMAT AD DIVDIADOVO	Keramata AD	Shumen	Shumen Divdiadovo	6,306	6,831	6,831	6,831	6,831
168	265	REKULTIVACIA OOD	Rekultivacia OOD	Sofia	Sofia	6,225	6,225	6,225	6,225	6,225
169	9-269	STROIKERAMIKA OOD MONTANA	Eng. Vencislav Dimitrov Georgiev	Montana	Montana	7,052	7,052	7,052	7,052	7,052
170	157	STROIKERAMIKA OOD VRATZA	Jordanka Todorova	Vratza	Vratza	6,502	6,502	6,502	6,502	6,502
Total						26,152	26,677	26,677	26,677	26,677
Total for the sector						473,413	500,746	507,346	511,074	514,415
VIII. Cellulose and paper production										
Registered instalations										
171	206	ZAVOD ZA HARTIA BELOVO AD	Zavod za Hartia Belovo AD	Belovo	Belovo	18,839	19,778	21,118	23,867	26,214
172	208	SVILOZA AD	Svilozha AD	Svishtov	Svishtov	39,039	39,727	40,760	40,760	40,760
173	199	TRAKIA PAPIR AD	Trakia Papir AD	Pazardgik	Pazardgik	28,166	28,166	28,166	28,166	28,166
174	201	FABRIKA ZA HARTIA STAMBOLIASKI AD	Avinash Cander Tanega	Stamboliaski	Stamboliaski	129,797	129,797	129,797	129,797	129,797

No	Unique ID Code of the installations	Name of the installations	Name of the operator	Municipality	Town/village	Allocated Allowances 2008	Allocated Allowances 2009	Allocated Allowances 2010	Allocated Allowances 2011	Allocated Allowances 2012
Total						215,840	217,467	219,841	222,590	224,936
Late Installations										
175	209	KOSTENEC HHI AD	Kostenec HHI AD	Kostenec	Kostenec	20,119	18,840	18,840	18,269	18,269
Total						20,119	18,840	18,840	18,269	18,269
Known New entrants										
176	9-209	KOSTENEC HHI AD	Kostenec HHI AD	Kostenec	Kostenec	10,372	11,360	11,854	12,842	12,842
Total						10,372	11,360	11,854	12,842	12,842
NBYI Known Installations										
177	211	ZAVOD ZA HARTIA AD	Ivan Borisov Conev	Mizia	Mizia	24,019	24,019	36,261	39,516	39,516
178	9-87	MAER MELNHOF-NIKOPOL	Andreas Maerhofer	Nikopol	Nikopol	77,482	116,223	116,223	116,223	116,223
Total						101,501	140,242	152,484	155,738	155,738
Total for the sector						347,833	387,910	403,019	409,439	411,786
Allocated Allowances - TOTAL						53,491,920	57,847,437	64,764,695	65,032,779	61,638,856

SUMMARY
of the allowances allocation for the period 2008-2012

	2008	2009	2010	2011	2012
Allocated allowances - total	53,491,920	57,847,437	64,764,695	65,032,779	61,638,856
Operating installations registered before 30.11.2005	45,036,923	46,705,166	47,454,179	47,486,826	44,087,690
Known new installations	1,340,356	4,555,200	9,538,623	9,586,903	9,597,397
NBYI registered before 30.11.2005	3,824,594	3,863,642	5,006,080	5,006,423	5,006,742
Total for Registered installations	50,201,873	55,124,008	61,998,882	62,080,152	58,691,829
Correction returned into the Reserve late installations	284,097	176,478	227,018	240,035	138,837
Compromise	50,485,970	55,300,486	62,225,900	62,320,187	58,830,666
Operating installations, late before 28.02.2006	537,977	543,280	514,944	642,296	644,150
Late New entrants	1,831,310	1,058,303	1,058,797	1,059,785	1,059,785
Late NBYI registered before 28.02.2006	61,678	62,776	75,405	78,660	78,660
Total Late Installation	2,430,965	1,664,359	1,649,147	1,780,741	1,782,595
Compulsory measures, granted in direct proportion to the implementation of measures	859,082	1,059,070	1,116,665	1,171,886	1,164,432
Reserves reminder - Total	2,539,892	4,467,736	7,189,962	9,403,571	11,838,039
Reserve late installations	1,851,882	2,009,326	2,546,698	2,543,838	2,541,826
Reserve new entrants and cogeneration	539,325	2,309,724	4,494,578	6,711,047	9,147,528
Planning reserve for standardization of the degree-days	148,686	148,686	148,686	148,686	148,686
Total allowances in the scheme	56,031,813	62,315,173	71,954,657	74,436,350	73,476,895
Cold reserve	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000
Annual average for the period 2008-2012			67,642,978		
Annual average for the period 2008-2012 including cold reserve			68,642,978		