Further Background on Kyoto Protocol and EU ETS

9 Appendix

9.1 Annex-I and Annex-B Countries

9.2 Allocation under the Burden Sharing Agreement

9.3 Kyoto Time line

9.4 Carbon Dioxide Equivalents (CO_2eq)

9.5 Electricity Generation in the EU 25

9.6 Different Types of Allowances

9.7 Surplus of allocation over 2005 verified emissions

9.8 Emissions to Cap (E-t-C)

click below to access the above topics.

9.1 Annex-I and Annex-B Countries

Annex I countries are referred to as the 36 industrialized countries and economies in transition (EIT) which are listed in Annex I to the UNFCCC.

They have agreed on various responsibilities, including a non-binding commitment to reduce their GHGs to 1990 levels by the year 2000.[67]

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The Annex B countries to the Kyoto protocol are the 39 emissions capped industrial countries that have agreed to set a ceiling to the amount of greenhouse gases they emit within the first commitment period 2008-2012. This commitment is legally binding and the obligations range from 8% reduction to a 10% increase compared to 1990 levels.

Annex-B includes all Annex-I countries except Belarus and Turkey, whilst Croatia, Liechtenstein, Monaco and Slovenia are listed in Annex B but not Annex I.

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The following table shows the countries and their commitment.

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Countries and their quantified emission limitation or reduction commitment as percentage of base year or period			
Australia	108	Liechtenstein*	92
Austria	92	Lithuania (EIT)	92
Belarus (EIT)	Â	Luxembourg	92
Belgium	92	Monaco*	92
Bulgaria (EIT)	92	Netherlands	92
Canada	94	New Zealand	100
Croatia (EIT)*	95	Norway	101
Czech Republic (EIT)	92	Poland (EIT)	94
Denmark	92	Portugal	92
Estonia (EIT)	92	Romania (EIT)	92
European Community	92	Russian Federation (EIT)	100
Finland	92	Slovakia (EIT)	92
France	92	Slovenia (EIT)*	92
Germany	92	Spain	92
Greece	92	Sweden	92
Hungary (EIT)	94	Switzerland	92
Iceland	110	Turkey	Â
Ireland	92	Ukraine (EIT)	100
Italy	92	United Kingdom of Great Britain and Northern Ireland	92
Japan	94	United States of America	93
Latvia (EIT)	92	Â	Â

Table 9â€‘1: Annex-I and Annex-B Countries[68]

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*These countries are not included in Annex I to the UNFCCC but in Annex B to the Kyoto Protocol

Belarus and Turkey are members of Annex I but do not have an Emissions Target in Annex B of the Kyoto Protocol

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In the Conference of parties only countries that have signed the Kyoto protocol have the right to participate.

After the Kyoto protocol came into force in February 2005, so-called COP MOPs (Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol) were introduced.

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Non-Annex I countries do not have binding emissions reduction targets for the first commitment period (2008-2012) of the Kyoto protocol. These countries are not allowed to participate in the international emissions trading market. However, they can still benefit from undertaking CDM-Projects together with an Annex I country or alone and selling the CERs to a market participant.

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9.2 Allocation under the Burden Sharing Agreement

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Member State	CO_2 allowances in mio. tonnes	Share in EU allowances	Installations covered	Registry functional	Kyoto target
Austria	99.0	1.5 %	205	Yes	-13%*
Belgium	188.8	2.9 %	363	No	-7.5%*
Czech Republic	292.8	4.4 %	435	No	-8%
Cyprus	16.98	0.3 %	13	No	–
Denmark	100.5	1.5 %	378	Yes	-21%*
Estonia	56.85	0.9 %	43	No	-8%
Finland	136.5	2.1 %	535	Yes	0%*
France	469.5	7.1 %	1,172	Yes	0%*
Germany	1,497.0	22.8 %	1,849	Yes	-21%*
Greece	223.2	3.4 %	141	No	+25%
Hungary	93.8	1.4 %	261	No	-6%
Ireland	67.0	1.0 %	143	No	+13%*
Italy	697.5	10.6 %	1,240	No	-6.5%
Latvia	13.7	0.2 %	95	No	-8%
Lithuania	36.8	0.6 %	93	No	-8%
Luxembourg	10.07	0.2 %	19	No	-28%*
Malta	8.83	0.1 %	2	No	–
Netherlands	285.9	4.3 %	333	Yes	-6%*
Poland	717.3	10.9 %	1,166	No	-6%
Portugal	114.5	1.7 %	239	No	+27%*
Slovak Republic	91.5	1.4 %	209	No	-8%
Slovenia	26.3	0.4 %	98	No	-8%
Spain	523.3	8.0 %	819	Yes	+15%
Sweden	68.7	1.1 %	499	Yes	+4%*
United Kingdom	736.0	11.2 %	1,078	Yes	-12.5%*
Total	6,572	100.0 %	11,428	Â	Â

Table 9â€‘2: Allowance allocation in the EU

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Note: Figures do not take into account any opt-ins and opt-outs of installations in accordance with Article 24 and 27 of Directive 2003/87/EC.

* Under the Kyoto Protocol, the EU15 has to reduce its collective greenhouse gas emissions by 8% below 1990 levels during 2008-2012. This target is shared among the 15 Member States under a legally binding burden-sharing agreement (Council Decision 2002/358/EC of 25 April 2002). The majority of the Member States that joined the EU on 1 May 2004 have individual targets under the Kyoto Protocol with the exception of Cyprus and Malta, which have no targets.[69

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9.3 Kyoto Time line

Date	Convention timeline / Protocol timeline
2005	– February, entry into force of Kyoto Protocol – November and December COP 11 and COP/MOP 1 (Montreal, Canada)
2004	– December COP 10 (Buenos Aires, Argentina) – Buenos Aires Programme of Work on Adaptation and Response Measures
2002	– October and November COP 8 (New Delhi, India) Delhi Declaration – August and September progress since 1992 reviewed at World Summit on Sustainable Development
2001	– July COP 6 Bis in Bonn – resulted in agreement on a range of issues between all the major players, apart from the United States, who have withdrawn from the Kyoto process.
2001	– October and November COP 7 (Marrakesh, Morocco) – Marrakesh Accords – April, IPCC Third Assessment Report – July, COP 6 resumes (Bonn Germany) – July, Bonn Agreements
2000	– November COP 6 in The Hague – delegates were unable to come to an agreement, and the Conference President, Jan Pronk, suspended the meetings until July 16-27, 2001, in Bonn, Germany (informally known as COP6 bis) – Talks based on the Plan break down
1998	November COP 4 in Buenos Aires – UNFCCC parties agreed to a timetable that requires all of the rules to be in place by the Sixth Conference of the Parties (COP6) – Buenos Aires Plan of Action
1997	– December, COP 3 (Kyoto, Japan) – Kyoto Protocol adopted
1995	– March and April, Conference of Parties COP 1 (Berlin, Germany) – March and April, Berlin Mandate
1994	– March, Convention enters into force
1992	– May, INC adopts UNFCCC text – June, UNFCCC opened for signature at Earth Summit
1991	First meeting of the INC
1990	– IPCC and second WCC call for global treaty on climate change – September, United Nations General Assembly negotiations on a framework convention
1988	– Intergovernmental Panel on Climate Change (IPCC) formed by the World meteorological Organization (WMO) and the United Nations Environment Programme (UNEP)
1979	– First World Climate Conference (WCC)

Table 9â€‘3: Time line[70]

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9.4 Carbon Dioxide Equivalents (CO_2eq)

GHG	GWP
Carbon dioxide (C02)	1
Methane (CH4)	21

Nitrous oxide (N2O)	310
Hydrofluorocarbons (HFCs)	(HFC23) 11,700
Perfluorocarbons (PFCs)	10,000
Sulphur hexafluoride (SF6)	23,900

Table 9â€‘4: GHGs and their global warming potential[71]

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The Table above shows the GHGs covered under the Kyoto Protocol and heir global warming potential.

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9.5 Electricity Generation in the EU 25

About 54% of power in the EU 25 is generated burning fossil fuels, which makes the EUA price an important factor for generators.

{fusionchart id=”15″ Sources of Electricity Generation in the EU25 in %}

Graph 9â€‘1: Sources for Generation[72]

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9.6 Different Types of Allowances

AAU Assigned Amount Unit	The main currency of international emissions trading. Allocated initial emissions allowances. These are only transferred/traded between Annex-B countries in the period 2008-2012 and allow them to comply with article 3 of the Kyoto Protocol.
CER Certified Emission Reduction	Kyoto credits resulting from CDM (Clean Development Mechanism) projects. Transferred to the investor country. Can be used for compliance from start of protocol.
EUA European Union Allowances	The credits traded within the EU Emissions Trading Scheme. Can only be traded between participants in the EU ETS who hold an account in one of the EU-Member states. Allowances for the second period (2008+) will be EUA as well as AAU at the same time. But AAUs from non-EU countries can not be sold into the EU ETS
ERU Emission Reduction Unit	Kyoto credits resulting from JI (Joint Implementation) projects and transferred to investor country. Projects can only be started after 2008.

RMU Removal Unit	Kyoto credits from human induced removal of greenhouse gases through LULUCF (Land Use, Land-Use Change and Forestry) activities in Annex I countries

Table 9â€‘5: Different types of allowances

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9.7 Surplus of allocation over 2005 verified emissions

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Table 9â€‘6: Surplus of allocation over 2005 verified emissions[73]

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9.8 Emissions to Cap (E-t-C)

Emissions-to-cap (E-t-C) is calculated by subtracting the seasonally adjusted cap from emissions (actual or forecasted). This metric gives an indication of whether the market (for a specific period) is producing more or less than the seasonally adjusted cap for that same period. More specifically, if not taking CERs into account, a positive (negative) E-t-C means that the market is fundamentally short (long), suggesting a buy (sell) signal.[74]