

FINNISH PROPOSAL FOR A NATIONAL ALLOCATION PLAN FOR EMISSION ALLOWANCES FOR THE YEARS 2008–2012, ANNEX 5

Table I **NAP summary table – target calculation**

(Grey fields are filled out automatically)

Row	Data table no.		Emissions (Mt CO ₂ eq)
A		Target under Kyoto Protocol or Burden Sharing Agreement (avg. annual GHG emissions 2008-12)	71,1
B	III	<i>Total GHG emissions 2003 (excluding LULUCF emissions and removals)</i>	85,7
C		Difference +/- (row A - row B) (negative means need to reduce)	-14,6
D	III	<i>Av. annual projected total GHG emissions 2008-2012 ('with measures' projection)</i>	82,3
E		Difference +/- (row A - row D) (negative means need to reduce)	-11,2
Reduction measures <i>(where relevant)</i>			
F	V	EU emissions trading scheme [1], [2]	-8,7
G	VI	Additional policies and measures (other than emissions trading), including LULUCF	-0,1
H	VII	Government purchase of Kyoto mechanisms	-2,4
I		Total reduction measures (row F + row G + row H)	-11,2

[1] Please insert average annual contribution to reduction (in negative figure)

[2] Please insert the figure in Table V, Line L, Column iv minus the annual average emissions in 2008-2012 in the ETS sector under the business as usual scenario

Finnish NAP2 Notes: Row G: Includes the effect of other additional measures than ET (-1,0 Mt) and the effect of the use Article 3.3 (+0,9 Mt).

Table IIa

NAP Summary table – Basic data

(Grey fields are filled out automatically)

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
A	Real GDP [1] (in billion €2000)	Absolute	93,0	87,0	84,0	83,7	87,1	90,5	94,0	99,7	104,7	109,0	115,2	118,5
		Trend index 2003=100	76,85	71,90	69,37	69,13	72,01	74,82	77,65	82,34	86,48	90,06	95,16	97,88
B	Emissions [1] (Mt of CO ₂) [2]	Absolute	56,7	55,5	54,5	56,2	61,6	58,1	63,9	62,6	59,2	58,8	57,1	62,6
		Trend index 2003=100	77,63	75,88	74,57	76,95	84,22	79,49	87,44	85,65	81,03	80,50	78,13	85,59
C	Carbon intensity [1] (million tonnes CO ₂ / billion €)	Absolute	0,61	0,64	0,65	0,67	0,71	0,64	0,68	0,63	0,57	0,54	0,50	0,53
		Trend index 2003=100	101,02	105,54	107,50	111,32	116,96	106,24	112,60	104,02	93,70	89,38	82,10	87,44
Year		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Annual average 2008-2012	
A	Real GDP [1] (in billion €2000)	Absolute	120,0	121,0	125,2	128,9	134,0	137,7	140,6	144,2	147,5	150,6	153,7	147,34
		Trend index 2003=100	99,1	100,0	103,5	106,5	110,8	113,8	116,2	119,2	121,9	124,4	127,0	121,7
B	Emissions [1] (Mt of CO ₂) [2]	Absolute	65,0	73,1	69,1	58,5	69,6	71,4	72,0	74,2	73,0	68,3	66,0	70,70
		Trend index 2003=100	89,0	100,0	94,6	80,0	95,2	97,6	98,5	101,5	99,9	93,4	90,3	96,7
C	Carbon intensity [1] (million tonnes CO ₂ / billion €)	Absolute	0,54	0,60	0,55	0,45	0,52	0,52	0,51	0,51	0,49	0,45	0,43	0,48
		Trend index 2003=100	89,8	100,0	91,4	75,1	86,0	85,8	84,7	85,2	81,9	75,1	71,1	79,6

[1] Indicate data source(s), separately per year where relevant.

[2] Please note that contrary to the explanation of Table IIa on page 34 of the English version of the NAP2 guidance communication, we are requesting here only CQ and not total greenhouse gas emissions.

Finnish NAP2 Notes:

Row A: GDP at basic prices, reference year 2000, years 1990-2004 from National Accounts, Statistics of Finland and years 2005-2012 from projections

Row B: Years 1990-2004 from NIR 2006, years 2005-12 from projections, excludes LULUCF

Table IIb.

NAP Summary table – Basic data on electricity sector [1]

(Grey fields are filled out automatically)

	Year	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average 2008-2012
A	Total domestic electricity production (TWh)	67,3	80,3	82,1	68,5	81,0	82,0	83,0	85,7	87,6	88,8	90,0	87,1
B	Total Imports (TWh)	12,2	12,2	12,5	18,2	13,5	14,0	15,0	15,0	15,0	15,0	15,0	15,0
	B/a Russia	4,5	11,4	11,7	11,3	11,0	11,0	11,0	11,0	11,0	11,0	11,0	11,0
	B/b Estonia	0,0	0,0	0,0	0,0	0,0	1,0	2,0	2,0	2,0	2,0	2,0	2,0
	B/c Nordic countries	7,7	0,8	0,9	6,8	2,5	2,0	2,0	2,0	2,0	2,0	2,0	2,0
C	Total Exports (TWh)	0,3	6,8	7,0	0,9	3,5	4,0	5,0	6,6	7,0	7,2	7,4	6,6
	C/a Russia												
	C/b Estonia												
	C/c Nordic countries	0,3	6,8	7,0	0,9	3,5	4,0	5,0	6,6	7,0	7,2	7,4	6,6
D	Electricity trade balance (TWh, total row B - total row C)	11,9	5,4	5,5	17,2	10,0	10,0	10,0	8,4	8,0	7,8	7,6	8,4
E	Share of gas in total domestic electricity production (%)	12,4 %	13,6 %	13,9 %	15,6 %	14,8 %	14,9 %	15,1 %	15,1 %	15,1 %	14,8 %	14,7 %	15,0 %
F	Share of oil in total domestic electricity production (%)	1,9 %	2,4 %	0,9 %	0,9 %	0,9 %	0,9 %	0,9 %	0,9 %	0,9 %	0,9 %	0,8 %	0,9 %
G	Share of coal in total domestic electricity production (%)	12,2 %	22,6 %	19,2 %	11,9 %	18,7 %	19,0 %	19,5 %	20,5 %	16,3 %	10,7 %	9,4 %	15,3 %
H	Share of nuclear energy in total domestic electricity production	32,1 %	27,2 %	26,6 %	32,6 %	26,6 %	26,2 %	25,9 %	25,1 %	28,2 %	35,0 %	38,4 %	30,5 %
I	including biomass, in total domestic electricity production (%) [2]	29,7 %	25,6 %	28,8 %	31,7 %	30,1 %	30,0 %	29,9 %	29,3 %	28,9 %	28,5 %	28,1 %	29,0 %

[1] Indicate data source(s), separately per year where relevant.

[2] The cell in row I for the year 2010 should also include (in footnote) the target pursuant to Directive 2001/77/EC.

**Finnish
NAP2
Notes:**

Rows A-C: Source for the years 2000-2004, Energy Statistics 2004 Statistics Finland and projections for the years 2005-2012
Row I: The target pursuant to Directive 2001/77/EC is 31,5 %. However, row I indicates the share of renewable energy in total domestic electricity production instead of consumption, which is the focus of the Directive 2001/77/EC

Table III

NAP Summary table – Recent and projected greenhouse gas emissions per common reporting format sector (without taking into account additional policies and measures in Table VI)

(Grey fields are filled out automatically)

Row ref.	CRF subsector			in Mt CO ₂ eq								Average annual projected emissions 2008-2012
				2003	2004	2005	2008	2009	2010	2011	2012	
A	1.A.1	Energy generation	GHG	36,8	33,1	21,9	35,3	37,3	36,0	31,3	29,1	33,8
B			CO ₂ in ETS	33,9	32,4	20,5	34,5	36,5	35,1	30,5	28,3	33,0
C	1.A.3	Transport	GHG	13,7	14,1	14,2	14,4	14,5	14,5	14,5	14,5	14,5
D	1.A.4.a + b + c	Commercial and institutional, Residential, and Agricultural energy use	GHG	6,3	6,2	5,8	5,0	4,9	4,8	4,7	4,6	4,8
E			CO ₂ in ETS	0	0	0	0	0	0	0	0	0,0
F	2	Industrial processes	GHG	6,0	6,2	6,8	7,8	8,0	8,1	8,2	8,3	8,1
G			CO ₂ in ETS	3,8	3,8	3,5	4,3	4,4	4,4	4,4	4,4	4,4
I	4	Agriculture	GHG	5,7	5,6	5,5	5,0	4,8	4,7	4,6	4,6	4,7
J	5	Land-Use Change and Forestry	GHG	-17,8	-18,5	-18,5	-18,5	-18,5	-18,5	-18,5	-18,5	-18,5
K	6	Waste	GHG	2,8	2,6	2,7	2,5	2,5	2,4	2,4	2,4	2,4
L	1.A.2 + 1.A.4 + 1.A.5 + 1.B + 3 + 7	All other sectors	GHG	14,4	13,5	13,6	13,8	13,9	14,1	14,1	14,1	14,0
M			CO ₂ in ETS	11,5	10,7	9,0	10,7	10,9	10,9	11,0	11,0	10,9
N		Total (A+C+D+F+I+J+K+L)	GHG	85,7	81,4	70,6	83,9	85,9	84,6	79,8	77,5	82,3
O		Total in ETS (B + E + G + M)	CO ₂ in ETS	49,2	46,9	33,1	49,5	51,8	50,5	45,9	43,7	48,3

Table IV NAP Summary table – Recent and projected CO₂ emissions in sectors covered by the EU emissions trading scheme

(Grey fields are filled out automatically)

Emissions in Mt CO ₂ eq		i	ii	iii [3]	iv	v	vi	vii	viii	ix	x	xi
Year		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average annual projected emissions 2008 – 2012 [1]
A	combustion installations total (excluding installations covered under rows B-J)	32,9	30,4	18,4	29,2	29,8	30,3	32,3	30,8	26,1	23,9	28,7
	powergen	16,6	15,2	3,1	12,5	12,7	13,0	14,7	13,0	8,2	5,8	10,9
	other combustion	16,0	14,9	14,9	16,3	16,7	16,9	17,2	17,4	17,5	17,7	17,3
	flaring											
	integrated steelworks											
	crackers	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
	furnaces [4, 5]											
	other											
B	mineral oil refineries	3,0	3,0	2,7	3,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3
C	coke ovens											
D	metal ore roasting, sintering, pig iron and steel producing installations	6,1	6,3	6,3	6,6	6,7	6,7	6,8	7,0	7,0	7,0	6,9
E	cement producing installations	0,8		1,0	1,4	1,4	1,4	1,4	1,5	1,5	1,5	1,5
F	lime producing installations	0,8		0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6
G	glass and glass fibre producing installations	0,2	2,1	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
H	ceramics producing installations	0,1		0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
I	pulp, paper and board producing installations	5,2	5,2	4,2	5,7	5,8	5,9	6,0	6,1	6,1	6,1	6,1
J [6]	Total (ΣRows A and B to I) [2]	49,2	46,9	33,5	40,5	48,8	49,5	51,8	50,5	45,9	43,7	48,3
K	Share of EU ETS CO₂ in total GHG emissions (%) (Row J / Row N in table III)	57,5 %	57,6 %	47,4 %	49,3 %	58,5 %	59,1 %	60,2 %	59,7 %	57,5 %	56,4 %	58,6 %

[1] Numbers to be used in last two columns of Table V.

[2] Row J must be equal to Row O in Table III:

[3] Please insert figures equal to the registry data on the surrendered amount of allowances (note that this is not the allocation data).

Finnish [1] Row D: Includes emissions from metal ore roasting, sintering, pig iron and steel producing installations but also emissions from combustion installations of integrated steelworks and coke ovens.

NAP2 [2] Row G: Includes also emissions from production of mineral wool

Notes: [3] ROW J: Includes also crackers, which do not belong to the scope of ETS in 2005

Table V NAP Summary table – Proposed allocation in relation to first period allocation (without additional policies and measures) in the sectors covered by the EU ETS

(Grey fields are filled out automatically)

		i	ii	iii	iv	v
		2003 actual CO ₂ emissions (Mt CO ₂)	2004 actual CO ₂ emissions (Mt CO ₂)	Average annual allocation 2005 - 2007	Proposed average annual allocation in 2008-2012 [Note 2]	Proposed ETS allocation as a percentage of first period ETS allocation
A	combustion installations total (excluding installations covered under rows B-J)	32,9	30,4	26,8	20,2	75,3 %
	powergen	16,6	15,2	9,4	3,3	35,1 %
	other combustion/general	16,0	15,1	17,3	16,4	94,9 %
	crackers	0,4	0,4	-	0,4	
B	mineral oil refineries	3,0	2,7	3,1	3,7	120,5 %
C	coke ovens	0,0	0,0	0,0	0,0	
D	metal ore roasting, sintering, pig iron and steel producing installations	6,1	6,3	7,0	6,8	96,9 %
F	<i>cement producing installations</i>	0,8	2,1	1,1	1,3	120,1 %
G	<i>lime producing installations</i>	0,8		0,9	0,8	91,9 %
H	glass and glass fibre producing installations	0,23		0,16	0,17	103,9 %
I	<i>ceramics producing installations</i>	0,1		0,03	0,03	110,9 %
J	pulp, paper and board producing installations	5,2	5,2	5,6	5,6	99,5 %
L	Total	49,2	46,9	44,7	38,2	85,5 %

Finnish NAP2 notes: Note 1: Row D: Includes emissions from metal ore roasting, sintering, pig iron and steel producing installations but also emissions from coke ovens and combustion installations of integrated steelworks
Note 2: Columns iii and iv do not include allowances reserved for new entrants

Table VI

NAP Summary table – Reductions expected by policies and measures other than the EU emissions trading scheme and which have not been taken into account for the "with measures" projection presented in Table III (Mt CO₂eg)

Measures	i		ii		iii		iv		v		vi		vii		viii		ix	
	Under implementation [1]				Adopted [2]				Planned [3]									
	Expected average annual reduction (2008-12)		Full effects expected as from year		Expected average annual reduction (2008-12)		Full effects expected as from year		Expected average annual reduction (2008-12)		Full effects expected as from year		Expected average annual reduction (2008-12)		Full effects expected as from year			
	In ETS sectors	In non-ETS sectors			In ETS sectors	In non-ETS sectors			In ETS sectors	In non-ETS sectors			In ETS sectors	In non-ETS sectors				
A	Measures in the Transport sector																	
B			0,3		2010													
C															0,2			
D			0,4		2012													
E									0,1		2012							
F			0,1		2010													
G									0,0						0,1			
H																		
X	Subtotal		0,7						0,1						0,2			
Total (equal to row G in Table I)								0,8						0,2				

[1] Implementation is ongoing, and the measure is not taken into account for the "with measures" projections presented in Table III. As regards the year, Member States should indicate the year where the full or a substantial part of the effects can be expected, not the first year of implementation.

[2] The measure has been adopted by the final instance at the relevant local, regional or national level, but it is not yet implemented.

[3] The measure is at least mentioned in a formal government document.

Finnish NAPII Notes:

ROW D: The EU F-gas regulation

ROW F: Limitation of biodegradable waste volumes according to Directive on Landfills. National waste strategy in december 2004.

Table VII NAP Summary table – Government's planned use of Kyoto units (Mt CO₂eq) and status of implementation

(Grey fields are filled out automatically)

		ERUs	CERs	AAUs and others	Total	
A	Planned purchase	Total 2008-2012	2,8	5,9	3,5	12,2
B		Annual average	0,6	1,2	0,7	2,4
C	Quantity of units already paid for		0,8	1,2	0,5	2,5
D	Quantity of units contracted, but yet unpaid (delivery pending start of UN ITL) [1]			1		1,0
E	Neither bought nor contracted by date of notification (A - C - D)		2	3,7	3	8,7
F	Full budget appropriated to first commitment period (2008-12)	Currently available for 2006 (M EUR)				47,2
G		Committed for the future (M EUR) [2]				
H	Implied future price M EUR/Mt CO ₂ eq ((F+G)/E)		0	0	0	0,0

[1] Units partially paid for should be proportionally distributed between lines C and D

[2] Row G should not include the sums intended to cover payments for units represented in row D

Table VIII NAP Summary table – Details on new entrants, closures and auctioning	
Issues with respect to new entrants	Description of NAP provisions
Does the plan contain a new entrants' reserve?	Yes.
What is its size in absolute terms and as a percentage of the total quantity of allowances for the period?	The size of reserve is 7.0 Mt for the years 2008-2012.
What use is made of allowances left over in the reserve at the end of the trading period? (cancellation, sold)	They can be auctioned.
How will new entrants be treated in case the reserve runs out of allowances before the end of the trading period? (reserve replenished, further new entrants buy in the market)	Further new entrants have to buy allowances in the market.
Does the allocation to the new entrant depend on the actual choice of fuel?	Yes, installations with solid fuels get somewhat more allowances than installations with liquid or gaseous fuel.
Does the allocation to the new entrant depend on the actual choice of technology?	No, allocation does not depend on technology.
Does the allocation to the new entrant depend on the estimated or actual number of operating hours or does the allocation use a standard number of operating hours?	Allocation uses standard number of operating hours.
Auctioning	
Will any allowances be auctioned?	Auctioning will not be used.
What share of the total quantity of allowances will be auctioned?	
Who can participate in the auction?	
What auctioning method will be used?	
When/at what intervals will the auction(s) be held?	
What quantity of allowances will be auctioned each time?	
What use will be made of the revenues?	
Will the auctions be coordinated with any auctions in other Member States?	
Closures	
Do operators have to report to the competent authority when an installation closes, and on what conditions is an installation considered to be closed?	Operators have to report to the competent authority in the case of installation closure.
Does the operator continue to be issued allowances for a closed installation in the remaining years of the trading period? If the reply depends on whether the operator sets up a new entrant installation replacing the closed installation, please briefly describe the provision.	The operator will not be issued allowances for a closed installation in the remaining years of the trading period in the case of closure.
What happens to any allowances that were intended for an installation, which will not receive them after closure? (cancellation, fed into a new entrants' reserve, auctioning)	Allowances will be added into the new entrants' reserve.

Table IX

NAP Summary table – Further details on selected new entrants

	Power plant with a rated thermal input exceeding 20 MW	Power plant with a rated thermal input exceeding 20 MW
Maximum capacity of the actual installation		
Fuel (s) used		
Forecast number of operating hours/year in the period 2008 to 2012		
Annual allowance allocation in 2008 to 2012		

Table X NAP Summary table - Important assumptions on annual averages

Year	EU Allowance price (in Euro)	Crude oil price (Brent) [1] \$/barrel	Natural gas price [1], \$/MBtu	Coal price [1], \$/tonne	Exchange rate [2]	Other
2005	15,0	35,8	4,3	54,0		
2006	15,0	35,7	4,5	53,0		
2007	15,0	35,5	4,6	52,0		
2008	20,0	35,3	4,7	51,0		
2009	20,0	35,2	4,9	50,0		
2010	20,0	35,0	5,0	49,0		
2011	20,0	35,2	5,0	49,1		
2012	20,0	35,4	5,0	49,2		

[1] Use common market standard and specify, including the currency used; indicate in detail sources of data and methodologies

[2] For those Member States outside the Euro-zone

FINNISH NAP2 notes: Source WEO 2005 for fuel prices