

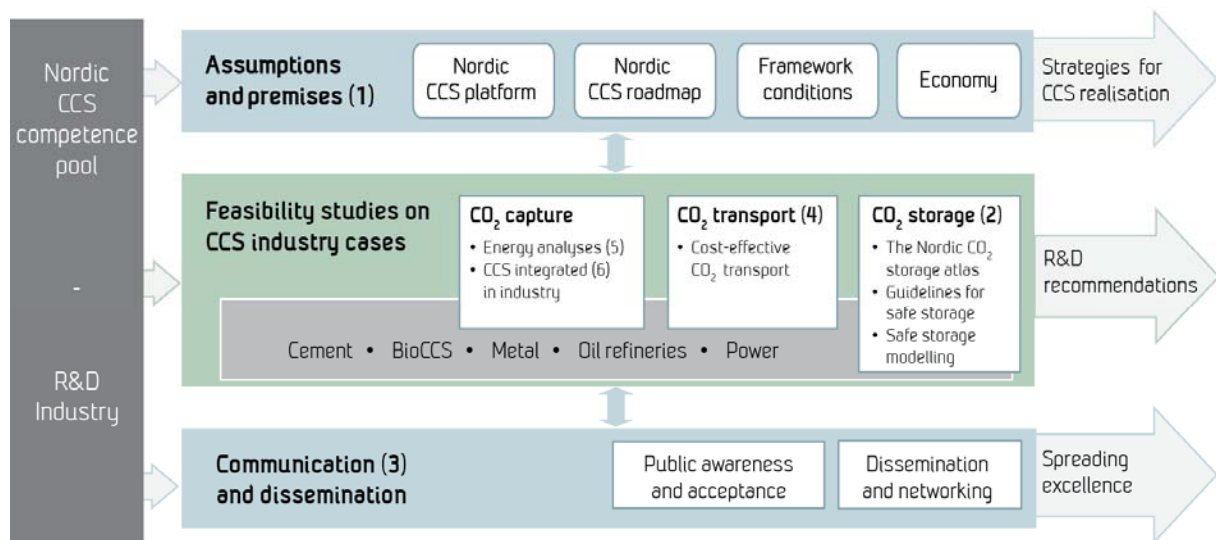
Nordic point source CO₂ emissions

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Summary

An overview of Nordic point source CO₂ emissions from sources emitting more than 100 000 t CO₂/a has been made. The table is based on reported emissions from 2011. Both fossil-based and biogenic CO₂ emissions have been included. The table is partly based on annual reports from installations, partly on the European Pollutant Release and Transfer register (E-PRTR) and partly based on calculations.

Keywords CO₂ emissions, Nordic countries, fossil, biogenic

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About NORDICCS

Nordic CCS Competence Centre, NORDICCS, is a networking platform for increased CCS deployment in the Nordic countries. NORDICCS has 10 research partners and six industry partners, is led by SINTEF Energy Research, and is supported by Nordic Innovation through the Top-level Research Initiative.

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FINLAND

No	Facility	Sector	Activity	Country	LAT	LONG	Total CO2 (t/a)	Fossil CO2 (t/a)	Bio CO2 (t/a)
1	Rautaruukki Oyj, Raahen terästehdas	Iron and steel production	2.(b)	FI	64,65	24,44	4 010 000	4 010 000	0
2	Neste Oil Oyj, Porvoon jalostamo	Oil and gas refineries	1.(a)	FI	60,31	25,52	2 950 000	2 950 000	0
3	Stora Enso Oyj, Imatran tehtaas	Pulp and paper production	6.(a)	FI	61,22	28,82	2 600 000	165 000	2 435 000
4	Fortum Power and Heat Oy, Meri-Porin voimalaitos	Power & heat production	1.(c)	FI	61,63	21,39	1 360 000	1 360 000	0
5	UPM-Kymmene Oyj, Pietarsaaren tehtaas	Pulp and paper production	6.(a)	FI	63,67	22,7	1 650 000	13 900	1 636 100
6	Oy Alholmens Kraft Ab, Pietarsaaren voimalaitos	Power & heat production	1.(c)	FI	63,7	22,7	1 660 000	829 000	831 000
7	UPM-Kymmene Oyj, Kaukaan tehtaas	Pulp and paper production	6.(a)	FI	61,09	28,25	1 580 000	109 000	1 471 000
8	Helsingin Energia, Vuosaaren voimalaitokset	Power & heat production	1.(c)	FI	60,22	25,17	1 560 000	1 560 000	0
9	Stora Enso Oyj, Oulun tehdas	Pulp and paper production	6.(b)	FI	65	25,43	1 550 000	278 000	1 272 000
10	Metsä Fibre Oy, Kemin tehdas	Pulp and paper production	6.(a)	FI	65,75	24,52	1 510 000	65 600	1 444 400
11	Turun seudun maakaasu ja energiatuotanto Oy, Naantalin voima	Power & heat production	1.(c)	FI	60,46	22,05	1 410 000	1 390 000	20 000
12	Stora Enso Oyj, Veitsiluodon tehtaas (massa + voimalaitos)	Pulp and paper production	6.(b)	FI	65,69	24,62	1 498 000	348 770	1 149 230
13	Metsä Fibre Oy, Joutsenon tehdas	Pulp and paper production	6.(a)	FI	61,13	28,45	1 420 000	78 500	1 341 500
14	Metsä Fibre Oy, Rauman tehtaas	Pulp and paper production	6.(a)	FI	61,11	21,47	1 250 000	62 400	1 187 600
15	Oulun Energia, Toppilan voimalaitokset	Power & heat production	1.(c)	FI	65,03	25,43	1 120 000	797 000	323 000
16	Vaskiluodon Voima Oy, Vaskiluoto 2-voimalaitos	Power & heat production	1.(c)	FI	63,04	21,78	974 000	974 000	0
17	Helsingin Energia, Hanasaari B-voimalaitos	Power & heat production	1.(c)	FI	60,18	24,97	983 000	983 000	0
18	UPM-Kymmene Oyj, Kymi	Pulp and paper production	6.(a)	FI	60,91	26,66	1 230 000	93 800	1 136 200
19	PVO-Lämpövoima Oy, Kristiinan voimalaitos	Power & heat production	1.(c)	FI	62,28	21,38	535 000	535 000	0
20	Kanteleen Voima Oy, Haapaveden voimalaitos	Power & heat production	1.(c)	FI	64,12	25,41	600 000	494 000	106 000
21	Helsingin Energia, Salmisaaren voimalaitokset	Power & heat production	1.(c)	FI	60,16	24,9	664 000	664 000	0
22	PVO-Lämpövoima Oy, Tahkoluodon voimalaitos	Power & heat production	1.(c)	FI	61,63	21,39	388 000	388 000	0
23	Vaskiluodon Voima Oy, Seinäjoen turvevoimalaitos	Power & heat production	1.(c)	FI	62,74	22,82	760 000	592 000	168 000
24	Fortum Power and Heat, Inkoon voimalaitos	Power & heat production	1.(c)	FI	60,01	23,91	985 000	985 000	0
25	FNsteel Oy Ab, Koverharin terästehdas	Iron and steel production	2.(b)	FI	59,88	23,2	758 000	758 000	0
26	UPM-Kymmene Oyj, Tervasaaren tehtaas	Pulp and paper production	6.(a)	FI	61,26	24,02	379 000	235 000	144 000
27	Metsä Fibre Oy (Äänekosken tehtaas)	Pulp and paper production	6.(a)	FI	62,59	25,71	926 000	60 800	865 200
28	Fortum Power and Heat Oy, Suomenojan voimalaitos	Power & heat production	1.(c)	FI	60,15	24,71	949 000	949 000	0
29	Stora Enso Oyj, Varkauden tehtaas	Pulp and paper production	6.(b)	FI	62,31	27,89	721 000	0	721 000
30	Jyväskylän Energiantuotanto Oy, Rauhalahden voimalaitos	Power & heat production	1.(c)	FI	62,24	25,81	166 000	166 000	0
31	Vantaan Energia Oy, Martinlaakson voimalaitos	Power & heat production	1.(c)	FI	60,28	24,83	721 000	721 000	0
32	Tampereen Energiantuotanto Oy, Naistenlahden voimalaitos	Power & heat production	1.(c)	FI	61,51	23,77	737 000	524 000	213 000
33	Lahti Energia Oy, Kymijärven voimalaitos	Power & heat production	1.(c)	FI	60,99	25,72	749 000	749 000	0
34	Outokumpu Chrome Oy, Outokumpu Stainless Steel, Tornion tel	Iron and steel production	2.(b)	FI	65,76	24,19	592 000	592 000	0

35	Finnsementti Oy, Paraisten sementtitehdas	Cement and lime production	3.(c)	FI	60,28	22,28	540 000	540 000	0
36	Stora Enso Enocell Oy, Enocell Oy:n sellutehdas	Pulp and paper production	6.(a)	FI	62,8	30,14	1 320 000	79 900	1 240 100
37	Kuopion Energia Oy, Haapaniemen voimalaitos	Power & heat production	1.(c)	FI	62,88	27,67	495 000	495 000	0
38	Etelä-Savon Energia Oy, Pursialan lämmitysvoimalaitos, Mikkeli	Power & heat production	1.(c)	FI	61,67	27,29	437 000	137 000	300 000
39	Kymin Voima Oy, Kuusankosken voimalaitos	Power & heat production	1.(c)	FI	60,9	26,66	354 000	55 300	298 700
40	Rauman Voima Oy, Rauman Voima	Power & heat production	1.(c)	FI	61,12	21,48	515 000	57 500	457 500
41	Fortum Power and Heat Oy, Kontiosuon voimalaitos, Joensuu	Power & heat production	1.(c)	FI	62,59	29,82	441 000	165 000	276 000
42	Kotkamills Oy	Pulp and paper production	6.(b)	FI	60,46	26,96	507 000	250 000	257 000
43	Pori Energia Oy, Aittaluodon voimalaitos	Power & heat production	1.(c)	FI	61,48	21,81	190 000	190 000	0
44	Stora Enso Oyj, Anjalankosken tehta	Pulp and paper production	6.(b)	FI	60,72	26,84	459 000	327 000	132 000
45	Neste Oil Oyj, Naantalin erikoistuotejalostamo	Oil and gas refineries	1.(a)	FI	60,45	22,06	406 000	406 000	0
46	Kainuun Voima Oy, Kajaanin höyry- ja lämpövoimalaitos	Power & heat production	1.(c)	FI	64,23	27,69	476 000	186 000	290 000
47	Borealis Polymers Oy, Olefiinituotanto	Production of chemicals	4.(a)	FI	60,3	25,52	442 000	442 000	0
48	Finnsementti Oy, Lappeenrannan sementtitehdas	Cement and lime production	3.(c)	FI	61,03	28,17	119 000	119 000	0
49	Stora Enso Oyj, Heinolan Flutingtehdas	Pulp and paper production	6.(a)	FI	61,18	26,08	343 000	182 000	161 000
50	Äänevoima Oy, Äänekosken voimalaitos	Power & heat production	1.(c)	FI	62,6	25,72	282 000	60 400	221 600
51	UPM-Kymmene Oyj, Jämsänkosken voimalaitos	Pulp and paper production	6.(b)	FI	61,91	25,16	327 000	94 400	232 600
52	UPM-Kymmene Oyj, Kaipolan tehta	Pulp and paper production	6.(b)	FI	61,81	25,23	259 000	61 200	197 800
53	Laanilan Voima Oy, Laanila, Oulun voimalaitos	Power & heat production	1.(c)	FI	65,03	25,52	318 000	260 000	58 000
54	Sappi Finland Operations Oy, Kirkniemen voimalaitos	Power & heat production	1.(c)	FI	60,19	23,94	378 000	269 000	109 000
55	Tampereen Energiantuotanto Oy, Lielahden voimalaitos	Power & heat production	1.(c)	FI	61,51	23,67	234 000	234 000	0
58	Stora Enso Oyj, Sunila Oy:n sellutehdas	Pulp and paper production	6.(a)	FI	60,49	26,95	871 000	48 600	822 400
59	Porin Prosessivoima Oy, Kaanaan voimalaitos	Power & heat production	1.(c)	FI	61,57	21,55	344 000	344 000	0
60	Rovaniemen Energia Oy, Suosiolan voimalaitos	Power & heat production	1.(c)	FI	66,49	25,67	275 000	165 000	110 000
61	Metsä Board Oyj, Simpeleen tehdas	Pulp and paper production	6.(b)	FI	61,43	29,34	199 000	73 000	126 000
62	Mäntän Energia Oy, Mäntän voimalaitos	Power & heat production	1.(c)	FI	62,03	24,64	180 000	118 000	62 000
63	Nordkalk Oyj Abp, Tytyrin kalkkitehdas	Cement and lime production	3.(c)	FI	60,26	24,06	157 000	157 000	0
64	Elenia Lämpö Oy, Hämeenlinnan Vanajan voimalaitos	Power & heat production	1.(c)	FI	60,97	24,5	207 000	93 100	113 900
65	Savon Sellu Oy, Savon sellu	Pulp and paper production	6.(b)	FI	62,94	27,72	288 000	119 000	169 000
66	Metsä Board Oyj, Kyro voimalaitos	Pulp and paper production	6.(b)	FI	61,66	23,18	170 000	170 000	0
67	Oy Kokkola Power Ab, Kokkolan voimalaitos	Power & heat production	1.(c)	FI	63,86	23,04	225 000	193 000	32 000
69	Kotkan Energia Oy, Hovinsaaren voimalaitos	Power & heat production	1.(c)	FI	60,47	26,91	219 000	102 000	117 000
70	Ekokem Oy Ab, Riihimäen toimipiste	Waste treatment or incineration	5.(a)	FI	60,77	24,82	228 000	228 000	0
71	Kokkolan Voima Oy, Ykspihlajan lämmitysvoimalaitos	Power & heat production	1.(c)	FI	63,85	23,05	119 000	41 500	77 500
73	SMA Mineral Oy, Röttän Kalkkitehdas	Cement and lime production	3.(c)	FI	65,76	24,15	124 000	124 000	0
76	Tornion Voima, Tornion voimalaitos	Power & heat production	1.(c)	FI	65,76	24,16	256 000	165 000	91 000
77	Jyväskylän Voima Oy, Keljonlahti	Power & heat production	1.(c)	FI	62,24	25,81	670 000	670 000	0

78 Porvoon Energia Oy, Tolkkisten höyryvoimalaitos	Power & heat production	1.(c)	FI	60,33	25,58	105 000	795	104 205
79 Kaukaan Voima Oy	Power & heat production	1.(c)	FI	61,33	28,1	701 000	118 000	583 000
80 VAPO OY, Forssan Voimalaitos	Power & heat production	1.(c)	FI	60,79	23,58	113 000	41 200	71 800
81 VAPO OY, Salon voimalaitos	Power & heat production	1.(c)	FI	60,37	23,11	121 000	96 100	24 900
82 Keravan Lämpövoima Oy, Keravan voimalaitos	Power & heat production	1.(c)	FI	60,36	25,11	140 000	45 800	94 200
84 Fortum Power and Heat Oy, Nokian voimalaitos	Power & heat production	1.(c)	FI	61,47	23,5	119 000	119000	0

DENMARK

No	Facility	Sector	Activity	Country	LAT	LONG	CO2 (t/a)	FOSSIL CO2 (t/a)	BIO CO2 (t/a)
1	DONG Energy A/S - Asnæsværket	Power & heat production	1.(c)	DK	55,66	11,07	1 610 000	1 610 000	
2	DONG Energy A/S - Avedøreværket	Power & heat production	1.(c)	DK	55,6	12,48	2 863 000	1 540 000	1 323 000
3	Aalborg Portland	Cement and lime production	3.(c)	DK	57,06	9,97	1 680 000	1 680 000	
4	Vattenfall A/S Nordjyllandsværket	Power & heat production	1.(c)	DK	57,07	10,04	1 790 000	1 790 000	
5	Dong Energy A/S Studstrupværket	Power & heat production	1.(c)	DK	56,25	10,34	2 346 000	2 230 000	116 000
6	DONG A/S Enstedværket	Power & heat production	1.(c)	DK	55,02	9,44	1 270 000	1 110 000	160 000
7	DONG A/S - Esbjergværket	Power & heat production	1.(c)	DK	55,45	8,45	1 830 000	1 830 000	
8	Vattenfall A/S Fynsværket	Power & heat production	1.(c)	DK	55,43	10,4	1 553 000	1 330 000	223 000
9	Vattenfall A/S Amagerværket	Power & heat production	1.(c)	DK	55,68	12,62	1 866 000	1 250 000	616 000
11	Tyra feltet	Offshore oil and gas activities	1.(g)	DK	55,6	4,9	531 000	531 000	
12	Dan feltet	Offshore oil and gas activities	1.(g)	DK	55,4	5,1	467 000	467 000	
13	I/S Vestforbraending	Waste treatment or incineration	5.(a)	DK	55,71	12,42	656 000	656 000	
14	DONG A/S, Skærbækværket	Power & heat production	1.(c)	DK	55,51	9,61	522 000	522 000	
15	Statoil A/S raffinaderi	Oil and gas refineries	1.(a)	DK	55,68	11,1	475 000	475 000	
16	A/S Dansk Shell - Raffinaderiet	Oil and gas refineries	1.(a)	DK	55,59	9,75	359 000	359 000	
17	Gorm feltet	Offshore oil and gas activities	1.(g)	DK	55,6	4,8	297 000	297 000	
18	Amagerforbraending	Waste treatment or incineration	5.(a)	DK	55,68	12,62	477 000	477 000	
19	DONG Energy A/S - H.C. Ørstedsværket	Power & heat production	1.(c)	DK	55,65	12,55	205 000	205 000	
20	Herningværket	Power & heat production	1.(c)	DK	56,12	9,01	394 000	46 000	348 000
21	Energi Randers Production A/S	Power & heat production	1.(c)	DK	56,46	10,03	269 000		269 000
22	DONG A/S Maabjergværket	Waste treatment or incineration	5.(a)	DK	55,52	9,62	264 000	152 000	112 000
23	DONG Energy A/S - Svanemølleværket	Power & heat production	1.(c)	DK	55,71	12,58	166 000	166 000	
24	Affaldscenter Aarhus - Forbraendsanlaegget	Waste treatment or incineration	5.(a)	DK	56,23	10,16	280 000	280 000	
25	L90 Affaldsforbraending	Waste treatment or incineration	5.(a)	DK	55,46	8,51	257 000	257 000	
26	Syd Arne feltet	Offshore oil and gas activities	1.(g)	DK	56	4,2	149 000	149 000	
27	I/S Kara Affaldsforbraendingsanlaeg	Waste treatment or incineration	5.(a)	DK	55,64	12,12	256 000	256 000	
28	Kommunekemi A/S	Waste treatment or incineration	5.(a)	DK	55,3	10,81	225 000	225 000	
29	I/S Reno Nord	Waste treatment or incineration	5.(a)	DK	57,02	10,01	214 000	214 000	
30	Silkeborg KRAFTVARMEVÆRK A/S	Power & heat production	1.(c)	DK	56,2	9,56	180 000	180 000	
31	Koege Kraftvarmeværk	Waste treatment or incineration	5.(a)	DK	55,46	12,19	137 000		137 000
32	VATTENFALL A/S Hillerød Kraftvarmeværk	Power & heat production	1.(c)	DK	55,9	12,31	137 000	137 000	
33	I/S Nordforbraending	Waste treatment or incineration	5.(a)	DK	55,9	12,49	162 000	125 000	37 000
34	Sønderborg Kraftvarmeværk	Waste treatment or incineration	5.(b)	DK	54,92	9,78	128 000	127 000	1 000
35	Halfdan feltet	Offshore oil and gas activities	1.(g)	DK	55,6	5	166 000	166 000	
36	Viborg Kraftvarmeværk A/S	Power & heat production	1.(c)	DK	56,45	9,39	126 000	126 000	
37	AffaldPlus - Naestved Kraftvarmeværk	Waste treatment or incineration	5.(a)	DK	55,21	11,73	136 000	136 000	
38	Dalum Papir	Pulp and paper production	6.(b)	DK	55,36	10,37	129 000		129 000

40	Kolding Forbraendingsanlaeg	Waste treatment or incineration	5.(a)	DK	55,51	9,45	178 000	153 000	25 000
41	REFA	Waste treatment or incineration	5.(a)	DK	54,78	11,88	138 000	138 000	
42	Novo Nordisk A/S - Kalundborg	Production of chemicals	4.(e)	DK	55,41	11,6			
43	Grenaa Kraftvarmevaerk	Power & heat production	1.(c)	DK	56,42	10,91	112 000	48 000	64 000
44	AffaldPlus Slagelse Forbr. And DONG Slagelse	Waste treatment or incineration	5.(a)	DK	55,42	11,35	108 000	60 000	48 000
45	Nordic Sugar Nakskov	Other	8.(b)	DK	54,83	11,14	136 000	136 000	
46	Siri feltet omfattende anlæg på Siri platforme	Offshore oil and gas activities	1.(g)	DK	56,4	4,8	84 000	84 000	
47	AarhusKarlshamn Denmark A/S	Other	8.(b)	DK	56,09	10,13	86 000	86 000	
48	Nordic Sugar Nykøbing A/S	Other	8.(b)	DK	54,77	11,88	103 000	103 000	
49	Odense Kraftvarmeværk	Waste treatment or incineration	5.(a)	DK	55,43	10,41	271 000	265 000	6 000
50	DONG A/S Hørsens Kraftvarmeværk	Waste treatment or incineration	5.(a)	DK	55,85	9,86	141 000	141 000	

NORWAY

No	Facility	Sector	Activity	Country	LAT	LONG	Total CO2 (t/a)	FOSSIL CO2 (t/a)	BIO CO2 (t/a)
1	Statoil Mongstad	Oil and gas refineries	1.(a)	NO	60,81	5,03	2120000	2120000	0
2	Åsgard	Offshore oil and gas activities	3.(a)	NO	65,1	7,5	1020000	1020000	0
3	Gassco AS, Kårstø	Oil and gas refineries	1.(a)	NO	59,28	5,52	1020000	1020000	0
4	Hammerfest LNG	Oil and gas refineries	1.(a)	NO	70,69	23,6	964000	964000	0
5	Oseberg	Offshore oil and gas activities	3.(a)	NO	60,49	2,83	888000	888000	0
6	Norcem Brevik	Cement and lime production	3.(c)	NO	59,06	9,69	851000	761000	90 000
7	Troll	Offshore oil and gas activities	3.(a)	NO	60,6	3,8	713000	713000	0
8	Gullfaks	Offshore oil and gas activities	3.(a)	NO	61,18	2,19	698000	698000	0
9	Ekofisk	Offshore oil and gas activities	3.(a)	NO	56,5	3,2	685000	685000	0
10	Statfjord	Offshore oil and gas activities	3.(a)	NO	61,25	1,85	679000	679000	0
11	Yara Norge AS, Yara Porsgrunn	Production of chemicals	4.(c)	NO	59,12	9,62	662000	662000	0
12	Naturkraft Kårstø	Production of electricity	1.(c)	NO	59,28	5,52	558000	558000	0
13	Sleipner	Offshore oil and gas activities	3.(a)	NO	58,5	1,7	826000	826000	0
14	NORETYL AS	Production of chemicals	4.(a)	NO	59,05	9,68	500000	500000	0
15	Hydro Aluminium AS Sunndal	Non-ferrous metal production	2.(e)	NO	62,36	8,38	493000	493000	0
16	Snorre	Offshore oil and gas activities	3.(a)	NO	61,5	2,3	476000	476000	0
17	Alcoa Møsøyen	Non-ferrous metal production	2.(e)	NO	65,5	13,12	398000	398000	0
18	Heidrun	Offshore oil and gas activities	3.(a)	NO	65,3	7,3	392000	392000	0
19	Elkem Salten	Production of chemicals	2.(e)	NO	68,44	16,16	360000	283000	77 000
20	Norcem Kjøpsvik	Cement and lime production	3.(c)	NO	68,69	16,21	358000	347000	11 000
21	Statoil ASA Tjeldbergodden Metanolfabrikk	Production of chemicals	4.(b)	NO	63,24	8,39	332000	332000	0
22	ESSO NORGE AS, Slagentangen	Oil and gas refineries	1.(a)	NO	59,18	10,31	327000	327000	0
23	Hydro Aluminium AS Årdal, Årdal Metallverk	Non-ferrous metal production	2.(e)	NO	62,04	5,29	322000	322000	0
24	Wacker Chemicals Norway	Production of chemicals	2.(e)	NO	63,32	9,14	316000	290000	26 000
25	ERAMET NORWAY AS, Sauda	Iron and steel production	2.(e)	NO	59,41	6,26	307000	307000	0
26	PETERSON LINERBOARD AS, Moss	Pulp and paper production	6.(a)	NO	59,44	10,67	302000	38400	263 600
27	Fesil Rana Metall AS	Iron and steel production	2.(e)	NO	66,31	14,16	302000	290000	12 000
28	Eldfisk	Offshore oil and gas activities	3.(a)	NO	56,38	3,62	301000	301000	0
29	Norne	Offshore oil and gas activities	3.(a)	NO	66	8,1	301000	301000	0
30	Hydro Aluminium AS Karmøy	Non-ferrous metal production	2.(e)	NO	59,15	5,14	297000	297000	0
31	Finnfjord AS	Iron and steel production	2.(e)	NO	69,23	17,98	293000	292000	1 000
32	TiZir Titanium & Iron AS	Iron and steel production	4.(b)	NO	60,11	6,55	277000	277000	0
33	Norske Skog Skogn	Pulp and paper production	6.(a)	NO	63,63	11,2	249000	4890	244 110
34	Klemetsrud utsorterings- og energigjenvinningsanlegg	Waste and waste water management	5.(b)	NO	59,84	10,83	234000	96600	137 400
35	Kristin	Offshore oil and gas activities	3.(a)	NO	65	6,4	223000	223000	0
36	Eramet Norway Kvinesdal AS	Iron and steel production	2.(e)	NO	58,2	7,12	222000	222000	0

37 BIR Avfallsenergi AS	Waste and waste water management	5.(b)	NO	60,28	5,32	221000	56000	165 000
38 Grane	Offshore oil and gas activities	3.(a)	NO	59,1	2,5	217000	217000	0
39 Valhall	Offshore oil and gas activities	3.(a)	NO	56,3	3,4	213000	213000	0
40 Borregaard Ind. Ltd., Cellulosesektor	Pulp and paper production	6.(a)	NO	59,28	11,11	208000	115000	93 000
41 Visund	Offshore oil and gas activities	3.(a)	NO	61,3	2,4	208000	208000	0
42 Ula	Offshore oil and gas activities	3.(a)	NO	57,1	2,8	196000	196000	0
43 Veslefrikk	Offshore oil and gas activities	3.(a)	NO	60,8	2,9	191000	191000	0
44 Brage	Offshore oil and gas activities	3.(a)	NO	60,6	3,1	189000	189000	0
45 Alvheim	Offshore oil and gas activities	3.(a)	NO	59,3	2	180000	180000	0
46 Draugen	Offshore oil and gas activities	3.(a)	NO	64,4	7,8	173000	173000	0
47 Alcoa aluminium, Lista	Non-ferrous metal production	2.(e)	NO	58,05	6,47	168000	168000	0
48 Jotun	Offshore oil and gas activities	3.(a)	NO	59,5	2,4	166000	166000	0
49 Elkem Thamshavn AS	Production of chemicals	2.(e)	NO	63,32	9,88	163000	133000	30 000
50 Njord	Offshore oil and gas activities	3.(a)	NO	64,3	7,2	145000	145000	0
51 Sør-Norge Aluminium	Non-ferrous metal production	2.(e)	NO	59,87	5,77	137000	137000	0
52 Balder	Offshore oil and gas activities	3.(a)	NO	59,19	2,39	135000	135000	0
53 NORSKE SKOGINDUSTRIER ASA, Saugbrugs	Pulp and paper production	6.(a)	NO	59,73	11,28	135000	4890	130 110
54 Heimdal	Offshore oil and gas activities	3.(a)	NO	59,6	2,2	133000	133000	0
55 Elkem Bjølvefossen	Iron and steel production	2.(e)	NO	60,43	6,43	133000	118000	15 000
56 Gjøa	Offshore oil and gas activities	3.(a)	NO	61,33	3,895	126000	126000	0
57 Haraldrud energigjenvinningsanlegg	Waste and waste water management	5.(b)	NO	59,56	10,45	120000	48200	71 800
58 Volve	Offshore oil and gas activities	3.(a)	NO	58,4	1,9	115000	115000	0
59 Norske Skogindustrier ASA, Follum Fabrikker	Pulp and paper production	6.(a)	NO	60,18	10,24	111000	2020	108 980
60 Hydro Aluminium AS Høyanger	Non-ferrous metal production	2.(e)	NO	61,21	6,05	100000	100000	0

SWEDEN

No	Facility	Sector	Activity	Country	LAT	LONG	Total CO2 (t/a)	Fossil CO2 (t/a)	Bio CO2 (t/a)
1	SSAB Oxelösund AB	Iron and steel production	2.(b)	SE	58,68	17,13	2 220 000	2 200 000	
2	Luleå kraftvärmeverk LUKAB	Power & heat production	1.(c)	SE	65,57	22,21	1 980 000	1 980 000	
3	M-real Sverige AB, Husums fabrik	Pulp and paper production	6.(a)	SE	63,34	19,16	1 630 000	76 000	1 554 000
4	Södra Cell Mönsterås	Pulp and paper production	6.(a)	SE	57,09	16,55	1 850 000	61 000	1 789 000
5	Preemraff, Lysekil	Oil and gas refineries	1.(a)	SE	58,35	11,42	1 740 000	1 740 000	
6	Gruvöns bruk	Pulp and paper production	6.(a)	SE	59,34	13,12	1 520 000	20 000	1 500 000
7	Stora Enso, Skutskärs bruk	Pulp and paper production	6.(a)	SE	60,64	17,39	1 610 000	24 000	1 586 000
8	Korsnäsverken	Pulp and paper production	6.(a)	SE	60,68	17,27	1 400 000	13 000	1 387 000
9	Östrand's massafabrik	Pulp and paper production	6.(a)	SE	62,48	17,29	1 300 000	67 000	1 233 000
10	Cementa AB, Slitefabriken	Cement and lime production	3.(c)	SE	57,71	18,80	1 680 000	1 570 000	110 000
11	SSAB Tunnpå AB, Luleå	Iron and steel production	2.(b)	SE	65,56	22,20	1 310 000	1 310 000	
12	Smurfit Kappa Kraftliner Piteå	Pulp and paper production	6.(a)	SE	65,33	21,44	1 180 000	22 000	1 158 000
13	Södra Cell Mörrum	Pulp and paper production	6.(a)	SE	56,16	14,76	980 000	66 000	914 000
14	Billerud Skärblacka AB	Pulp and paper production	6.(a)	SE	58,58	15,90	930 000	36 000	894 000
15	Södra Cell Värö	Pulp and paper production	6.(a)	SE	57,23	12,19	950 000	14 000	936 000
16	Västerås kraftvärmeverk	Power & heat production	1.(c)	SE	59,59	16,51	990 000	504 000	486 000
17	Skoghalls Bruk	Pulp and paper production	6.(b)	SE	59,32	13,44	940 000	70 000	870 000
18	Billerud Karlsborgs AB	Pulp and paper production	6.(a)	SE	65,80	23,29	750 000	10 000	740 000
19	VÄRTAVERKET	Power & heat production	1.(c)	SE	59,35	18,10	760 000	650 000	110 000
20	Iggesund Paperboard AB, Iggesund Bruk	Pulp and paper production	6.(a)	SE	61,64	17,08	820 000	67 000	753 000
21	STORA ENSO NYMÖLLA AB	Pulp and paper production	6.(a)	SE	56,04	14,48	730 000		730 000
22	Borealis Krackeranl.	Production of chemicals	4.(a)	SE	58,08	11,83	650 000	650 000	
23	SCA Munksund	Pulp and paper production	6.(b)	SE	65,28	21,52	650 000	30 000	620 000
24	Korsnäs Frövi AB	Pulp and paper production	6.(a)	SE	59,48	15,33	670 000	20 000	650 000
25	Händelöverket	Waste treatment or incineration	5.(b)	SE	58,62	16,23	720 000	190 000	530 000
26	Mondi Dynäs AB	Pulp and paper production	6.(a)	SE	62,97	17,72	570 000	11 000	559 000
27	Domsjö Fabriker AB	Pulp and paper production	6.(a)	SE	63,27	18,70	440 000	2 000	438 000
28	Boländeranläggningarna, Avfallsförbränningsanläggning	Power & heat production	1.(c)	SE	59,85	17,68	320 000	66 000	254 000
29	Vallviks Bruk	Pulp and paper production	6.(a)	SE	61,18	17,17	560 000	8 000	552 000
30	Bäckhammars Bruk	Pulp and paper production	6.(a)	SE	59,31	14,11	425 000	13 000	412 000
31	Stora Enso Kvarnsveden AB	Pulp and paper production	6.(b)	SE	60,48	15,42	330 000	17 000	313 000
32	Preem Petroleum AB Preemraff Göteborg	Oil and gas refineries	1.(a)	SE	57,71	11,83	470 000	470 000	
33	E ON Värme Sverige AB, Åbyverket	Power & heat production	1.(c)	SE	59,27	15,18	420 000	137 000	283 000
34	Sävenäs	Waste treatment or incineration	5.(b)	SE	57,73	12,05	550 000	190 000	360 000
35	Cementa AB Skövdefabriken	Cement and lime production	3.(c)	SE	58,38	13,82	363 000	357 000	6 000
36	St1 Raffinaderi AB (Ex. Shell)	Oil and gas refineries	1.(a)	SE	57,70	11,88	490 000	490 000	

37	SCA Packaging Obbola AB	Pulp and paper production	6.(b)	SE	63,73	20,23	480 000	30 000	450 000
38	Munksjö Aspa Bruk AB	Pulp and paper production	6.(a)	SE	58,76	14,80	460 000	16 000	444 000
39	Rya Gaskraftvärmeverk	Power & heat production	1.(c)	SE	57,69	11,89	390 000	390 000	
40	Sysavs avfallsförbränningsanläggning	Waste treatment or incineration	5.(b)	SE	55,63	13,04	510 000	150 000	360 000
41	Avfallskraftvärmeverket Torsvik	Waste treatment or incineration	5.(b)	SE	57,70	14,15	180 000	50 000	130 000
42	SSAB Tunnpå i Borlänge	Iron and steel production	2.(c)	SE	60,49	15,45	280 000	280 000	
43	Hässelbyverket	Power & heat production	1.(c)	SE	59,36	17,82	450 000	5 000	445 000
44	Kraftvärmeverket & Hetvattencentralen Vattumannen	Power & heat production	1.(c)	SE	59,38	16,49	380 000	13 000	367 000
45	Västhamsverket, (VHV)	Power & heat production	1.(c)	SE	56,03	12,69	385 000	50 000	335 000
46	Gärstadverket	Waste treatment or incineration	5.(b)	SE	58,44	15,66	350 000	60 000	290 000
47	Ryaverket, Borås	Power & heat production	1.(c)	SE	57,73	12,93	365 000	56 000	309 000
48	Bristaverket, Sigtuna	Power & heat production	1.(c)	SE	59,61	17,86	330 000		330 000
49	Ortvikens pappersbruk	Pulp and paper production	6.(b)	SE	62,37	17,33	270 000	30 000	240 000
50	LKAB - Kirunagruvan	Iron and steel production	2.(a)	SE	67,84	20,17	434 000	434 000	
51	Lugnviksverket, Östersund	Power & heat production	1.(c)	SE	63,21	14,65	230 000	30 000	200 000
52	Karskärsverket, Gävle	Power & heat production	1.(c)	SE	60,68	17,27	296 000	62 000	234 000
53	Sandviksverket, Växjö	Power & heat production	1.(c)	SE	56,87	14,84	350 000	30 000	320 000
54	CEMENTA, Degerhamn	Cement and lime production	3.(c)	SE	56,35	16,41	262 000	258 000	4 000
55	Kraftvärmeverket i Linköping	Power & heat production	1.(c)	SE	58,42	15,63	268 000	96 000	172 000
56	Bravikens Pappersbruk	Pulp and paper production	6.(b)	SE	58,58	16,17	183 000	50 000	133 000
57	Höganäs AB, Höganäs	Iron and steel production	2.(b)	SE	56,21	12,55	215 000	215 000	
58	Hallsta Pappersbruk	Pulp and paper production	6.(a)	SE	60,24	18,57	173 000	8 000	165 000
59	Nordkalk, Köping	Cement and lime production	3.(c)	SE	59,50	16,03	250 000	248 000	2 000
60	Vargön Alloys AB	Non-ferrous metal production	2.(e)	SE	58,36	12,38	117 000	117 000	
61	Idbäckens Kraftvärmeverk, Nyköping	Power & heat production	1.(c)	SE	58,74	17,00	192 000	1 000	191 000
62	Igelstaverket, Södertälje	Power & heat production	1.(c)	SE	59,18	17,67	404 000	119 000	285 000
63	Rönnskärsverken, Skellefteå	Non-ferrous metal production	2.(e)	SE	64,67	21,27	282 000	280 000	2 000
64	Pilkington Floatglas AB, Halmstad	Other	3.(e)	SE	56,64	12,94	146 000	146 000	
65	Stora Enso Fors AB	Pulp and paper production	6.(a)	SE	60,21	16,32	239 000	3 000	236 000
66	Kalkproduktion Storugns AB	Cement and lime production	3.(c)	SE	57,84	18,81	167 000	165 000	2 000
67	KVV-Åkerslund, Ängelholm	Power & heat production	1.(c)	SE	56,25	12,90	137 000	2 000	135 000
68	Dåva Kraftvärmeverk, Umeå	Waste treatment or incineration	5.(b)	SE	63,87	20,41	406 000	60 000	346 000
69	Heleneholmsverket (HVK), Malmö	Power & heat production	1.(c)	SE	55,58	13,01	130 000	130 000	
70	Kubikenborg Aluminium AB, Sundsvall	Non-ferrous metal production	2.(e)	SE	62,38	17,36	150 000	150 000	
71	Karlskoga kraftvärmeverk	Power & heat production	1.(c)	SE	59,34	14,54	115 000	40 000	75 000
72	HPC Simpan och Ena Kraft, kraftvärmeverket	Power & heat production	1.(c)	SE	59,63	17,08	87 000		87 000
73	SAKAB AB, Kumla	Waste treatment or incineration	5.(a)	SE	59,12	15,28	160 000	60 000	100 000
74	Munksjö Paper AB Billingsfors	Pulp and paper production	6.(a)	SE	58,99	12,26	165 000	20 000	145 000
75	Nynäshamns Raffinaderiet	Production of chemicals	4.(a)	SE	58,92	17,96	124 000	124 000	

76 Perstorp Specialty Chemicals AB, Ångcentralen	Power & heat production	1.(c)	SE	56,12	13,38	150 000	60 000	90 000
77 LKAB - Malmbergsgruvan	Non-ferrous metal production	3.(a)	SE	67,20	20,71	140 000	140 000	
78 Solnaverket	Power & heat production	1.(c)	SE	59,35	17,97	133 000	6 000	127 000
79 Heden kraftvärmeverk, Karlstad	Power & heat production	1.(c)	SE	59,39	13,57	150 000		150 000
80 AB Sandvik Materials Technology, Sandviken	Iron and steel production	2.(b)	SE	60,62	16,79	114 000	112 000	2 000
81 Älidhemsanläggningen, Umeå	Power & heat production	1.(c)	SE	63,81	20,32	120 000	10 000	110 000
82 Rättviks kalkverk, SMA Svenska Mineral AB	Cement and lime production	3.(c)	SE	60,90	15,17	83 000	83 000	
83 Hammarbyverket, Stockholm	Power & heat production	1.(c)	SE	59,30	18,09	72 000		72 000
84 Perstorp Oxo AB, Stenungsund	Production of chemicals	4.(a)	SE	58,10	11,86	101 000	101 000	
85 Sävenås Kraftvärmeverk, Göteborg	Power & heat production	1.(c)	SE	57,73	12,03	130 000	10 000	120 000
86 OVAKO Steel AB, Hofors	Iron and steel production	2.(b)	SE	60,55	16,30	93 000	93 000	
87 Allöverket	Power & heat production	1.(c)	SE	56,04	14,15	160 000	1 000	159 000
88 Nordkalk AB Luleå	Cement and lime production	3.(c)	SE	65,56	22,20	93 000	93 000	

ICELAND

No	Facility	Sector	Activity	Country	LAT	LONG	CO2 (t/a)	FOSSIL CO2 (t/a)	BIO CO2 (t/a)
1	Alcoa Fjarðaál	Non-ferrous metal production	2.(e)	IS	65,02	-14,13	511 000	511 000	
2	Nordural Grundartangi	Non-ferrous metal production	2.(e)	IS	64,35	-21,78	425 000	425 000	
3	Elkem Iceland	Iron and steel production	2.(e)	IS	64,35	-21,78	351 000	351 000	
4	Alcan Iceland	Non-ferrous metal production	2.(e)	IS	64,05	-22,03	273 000	273 000	

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