

# Recalculations - Nitrogen Oxides

Revision of NO<sub>x</sub> emissions over time:



Changes within the **National Total** reported for **1990 (+7.95 kt or +0.28 %)** are dominated by changes in NFRs **1.A.3.b i** (+30 kt) and **1.A.3.b iii** (-24 kt) together with less significant revisions throughout NFRs 1, 2 and 3.

The most significant percental change occurs for **NFR 3.D.a.2c with plus 12 %**.

Table 1: Changes of emission estimates 1990

NFR Sector	Submission 2022	Submission 2023	Difference		Reasoning
	[kt]		absolute	relative	
<b>NATIONAL TOTAL</b>	<b>2.835,33</b>	<b>2.843,28</b>	<b>7,95</b>	<b>0,28%</b>	see description and reasoning in: sub-category chapters
<b>NFR 1 - Energy</b>	<b>2.592,15</b>	<b>2.599,50</b>	<b>7,35</b>	<b>0,28%</b>	sub-category chapters
1.A.2.g vii	50,23	50,30	0,07	0,13%	<a href="#">here</a>
1.A.3.a i(i)	3,94	3,68	-0,26	-6,58%	<a href="#">here</a>
1.A.3.a ii(i)	2,78	2,60	-0,18	-6,53%	<a href="#">here</a>
1.A.3.b i	765,68	795,98	30,30	3,96%	<a href="#">here</a>
1.A.3.b ii	31,49	32,82	1,33	4,22%	<a href="#">here</a>
1.A.3.b iii	505,99	482,15	-23,84	-4,71%	<a href="#">here</a>
1.A.3.b iv	2,45	2,49	0,03	1,37%	<a href="#">here</a>
1.A.4.a ii	11,60	11,58	-0,01	-0,11%	<a href="#">here</a>
1.A.4.b ii	0,08	0,08	0,00	-0,02%	<a href="#">here</a>
1.A.4.c ii	49,31	49,23	-0,08	-0,17%	<a href="#">here</a>
<b>NFR 2 - IPPU</b>	<b>100,73</b>	<b>100,73</b>	<b>0,00</b>	<b>0,00%</b>	
<b>NFR 3 - Agriculture</b>	<b>141,92</b>	<b>142,52</b>	<b>0,60</b>	<b>0,42%</b>	sub-category chapters
3.B.4.g i	0,01427	0,01425	0,00	-0,081%	<a href="#">here</a>
3.D.a.2.a	44,14	44,52	0,38	0,85%	<a href="#">here</a>
3.D.a.2.c	0,002	0,224	0,22	11,68%	<a href="#">here</a>
3.D.a.3	8,40	8,40	0,00	0,02%	<a href="#">here</a>
<b>NFR 5 - Waste</b>	<b>0,53</b>	<b>0,53</b>	<b>0,00</b>	<b>0,00%</b>	

The changes within the **National Total** reported for **2020 (-28 kt or -2.46 %)** are dominated by changes in **NFR 2.B.2** (-25.6 kt) together with less significant revisions **throughout NFRs 1 and 3**.

Here, the most significant percental changes occur for NFRs **2.C.3 with plus 104 %** and **2.B.2 with minus 96 %**.

Table 2: Changes of emission estimates 2020

NFR Sector	Submission 2022	Submission 2023	Difference		Reasoning
	[kt]		absolute	relative	
<b>NATIONAL TOTAL</b>	<b>1,136.79</b>	<b>1,108.82</b>	<b>-27.97</b>	<b>-2.46%</b>	see description and reasoning in: sub-category chapters
<b>NFR 1 - Energy</b>	<b>938.97</b>	<b>938.49</b>	<b>-0.48</b>	<b>-0.05%</b>	sub-category chapters
1.A.1.a	186.93	186.02	-0.91	-0.49%	<a href="#">here</a>
1.A.1.b	13.98	14.42	0.44	3.16%	<a href="#">here</a>
1.A.1.c	12.85	13.10	0.25	1.97%	<a href="#">here</a>
1.A.2.a	3.61	3.57	-0.04	-1.06%	<a href="#">here</a>
1.A.2.b	0.93	0.92	-0.01	-1.04%	<a href="#">here</a>
1.A.2.e	0.20	0.19	-0.01	-6.98%	<a href="#">here</a>
1.A.2.g vii	14.39	14.62	0.23	1.58%	<a href="#">here</a>
1.A.2.g viii	64.41	70.35	5.94	9.23%	<a href="#">here</a>
1.A.3.a i(i)	5.39	5.04	-0.36	-6.63%	<a href="#">here</a>
1.A.3.a ii(i)	1.13	1.05	-0.08	-6.71%	<a href="#">here</a>
1.A.3.b i	211.62	200.13	-11.49	-5.43%	<a href="#">here</a>
1.A.3.b ii	48.72	48.97	0.25	0.51%	<a href="#">here</a>
1.A.3.b iii	92.85	90.66	-2.20	-2.37%	<a href="#">here</a>
1.A.3.b iv	1.55	1.57	0.02	1.32%	<a href="#">here</a>
1.A.3.c	8.13	8.69	0.56	6.84%	<a href="#">here</a>
1.A.3.d ii	21.63	21.62	0.00	-0.01%	<a href="#">here</a>
1.A.4.a i	19.51	22.22	2.72	13.93%	<a href="#">here</a>
1.A.4.a ii	7.61	7.63	0.02	0.27%	<a href="#">here</a>

	Submission 2022	Submission 2023	Difference		Reasoning
NFR Sector	[kt]		absolute	relative	see description and reasoning in:
<b>NATIONAL TOTAL</b>	<b>1,136.79</b>	<b>1,108.82</b>	<b>-27.97</b>	<b>-2.46%</b>	<b>sub-category chapters</b>
<b>NFR 1 - Energy</b>	<b>938.97</b>	<b>938.49</b>	<b>-0.48</b>	<b>-0.05%</b>	<b>sub-category chapters</b>
1.A.4.b i	59.57	58.80	-0.76	-1.28%	<a href="#">here</a>
1.A.4.b ii	0.5268	0.4194	-0.11	-20.39%	<a href="#">here</a>
1.A.4.c i	7.08	7.03	-0.05	-0.76%	<a href="#">here</a>
1.A.4.c ii	27.12	27.39	0.27	1.00%	<a href="#">here</a>
1.A.5.a	0.218	0.220	0.002	1.06%	<a href="#">here</a>
1.A.5.b	2.38	2.28	-0.10	-4.05%	<a href="#">here</a>
1.B.1.b	0.59	0.57	-0.02	-3.37%	<a href="#">here</a>
<b>NFR 2 - IPPU</b>	<b>54.47</b>	<b>54.92</b>	<b>0.45</b>	<b>0.82%</b>	<b>sub-category chapters</b>
2.A.1	11.72	12.95	1.23	10.54%	<a href="#">here</a>
2.A.3	10.69	10.49	-0.20	-1.88%	<a href="#">here</a>
2.H.1	2.68	2.09	-0.59	-21.91%	<a href="#">here</a>
<b>NFR 3 - Agriculture</b>	<b>108.75</b>	<b>110.15</b>	<b>1.40</b>	<b>1.29%</b>	<b>sub-category chapters</b>
3.B.1.a	0.506	0.502	-0.004	-0.75%	<a href="#">here</a>
3.B.1.b	0.506	0.505	-0.001	-0.17%	<a href="#">here</a>
3.B.3	0.26	0.24	-0.02	-5.30%	<a href="#">here</a>
3.B.4.g i	0.019	0.018	-0.001	-2.66%	<a href="#">here</a>
3.B.4.g ii	0.0135	0.0137	0.0001	1.06%	<a href="#">here</a>
3.B.4.g iii	0.0094	0.0094	0.000008	0.09%	<a href="#">here</a>
3.B.4.g iv	0.00202	0.00202	0.000002	0.09%	<a href="#">here</a>
3.D.a.1	53.71	52.31	-1.40	-2.61%	<a href="#">here</a>
3.D.a.2.a	36.76	37.16	0.40	1.09%	<a href="#">here</a>
3.D.a.2.b	0.56	0.49	-0.07	-12.25%	<a href="#">here</a>
3.D.a.2.c	11.56	14.00	2.44	21.12%	<a href="#">here</a>
3.D.a.3	4.62	4.67	0.05	1.02%	<a href="#">here</a>
3.l	0.169	0.171	0.002	1.16%	<a href="#">here</a>
<b>NFR 5 - Waste</b>	<b>0.71</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00%</b>	
<b>NFR 6 - Other</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		