

# Recalculations - Nitrogen Oxides

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



Changes within the **National Total reported for 1990 (-34 kt | -1.19 %)** are dominated by changes in **NFRs 1.A.3.b i, 1.A.3.b ii and 1.A.3.b iii** together with less significant revisions throughout NFRs 1, 2 and 3.

The most significant relative change occurs for **NFR 2.G with minus 58 %**.

Table 1: Changes of emission estimates 1990

absolute changes in emissions reported for 1990					Submission 2020	Submission 2021	Difference	Reasoning
NFR Code	[kt]			relative	see description and reasoning in:			
<b>NATIONAL TOTAL</b>	<b>2.850,05</b>	<b>2.835,33</b>	<b>-14,72</b>	<b>-0,52%</b>	<b>sub-category chapters</b>			
<b>NFR 1 - Energy</b>	<b>2.601,88</b>	<b>2.592,15</b>	<b>-9,73</b>	<b>-0,37%</b>	<b>sub-category chapters</b>			
1.A.3.a i(i)	3,94	3,94	0,00	-0,02%	<a href="#">here</a>			
1.A.3.a ii(i)	2,80	2,78	-0,01	-0,38%	<a href="#">here</a>			
1.A.3.b iii	506,00	505,99	-0,01	0,00%	<a href="#">here</a>			
1.A.3.c	45,05	45,32	0,26	0,59%	<a href="#">here</a>			
1.A.3.d ii	60,65	51,47	-9,18	-15,13%	<a href="#">here</a>			
1.A.4.b ii	0,06	0,08	0,02	30,65%	<a href="#">here</a>			
1.A.4.c iii	0,81	0,39	-0,42	-51,95%	<a href="#">here</a>			
1.A.5.b	41,60	41,20	-0,40	-0,96%	<a href="#">here</a>			
<b>NFR 2 - IPPU</b>	<b>106,37</b>	<b>100,73</b>	<b>-5,64</b>	<b>-5,30%</b>	<b>sub-category chapters</b>			
2.B.2	16,98	11,30	-5,68	-33,44%	<a href="#">2.B.2 - Nitric Acid Production</a>			
2.B.6	NE	0,04	0,04		<a href="#">2.B.6 - Titanium Dioxide Production</a>			
<b>NFR 3 - Agriculture</b>	<b>141,27</b>	<b>141,92</b>	<b>0,65</b>	<b>0,46%</b>	<b>sub-category chapters</b>			
3.B.1.b	0,6958	0,6896	-0,01	-0,89%	<a href="#">here</a>			
3.B.3	0,26	0,28	0,02	6,48%	<a href="#">here</a>			
3.B.4.g i	0,01443	0,01427	0,00	-1,145%	<a href="#">here</a>			
3.B.4.g iv	0,00251	0,00248	-0,00003	-1,33%	<a href="#">here</a>			
3.D.a.2.a	43,46	44,14	0,68	1,58%	<a href="#">here</a>			
3.D.a.3	8,44	8,40	-0,04	-0,49%	<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>				
<b>NFR 6 - Other</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>					

The small changes within the **National Total reported for 2018 (+8.22 kt | +0.68 %)** are dominated by changes in **NFRs 1 and 3**. Here, the most significant relative change occurs for **NFR 2.G with minus 49 %**.

Table 2: Changes of emission estimates 2018

absolute changes in emissions reported for 2018		Submission 2020	Submission 2021	Difference	Reasoning
NFR Code	[kt]			relative	see description and reasoning in: sub-category chapters
<b>NATIONAL TOTAL</b>	<b>1.202,28</b>	<b>1.210,50</b>	<b>8,22</b>	<b>0,68%</b>	sub-category chapters
<b>NFR 1 - Energy</b>	<b>996,11</b>	<b>1.007,16</b>	<b>11,05</b>	<b>1,11%</b>	sub-category chapters
1.A.1.a	239,65	241,73	2,08	0,87%	<a href="#">here</a>
1.A.1.b	13,03	16,16	3,13	24,04%	<a href="#">here</a>
1.A.1.c	12,04	13,06	1,02	8,50%	<a href="#">here</a>
1.A.2.a	4,10	4,17	0,07	1,75%	<a href="#">here</a>
1.A.2.b	0,99	1,02	0,03	2,54%	<a href="#">here</a>
1.A.2.e	0,19	0,21	0,02	9,42%	<a href="#">here</a>
1.A.2.g vii	11,31	15,37	4,07	35,97%	<a href="#">here</a>
1.A.2.g viii	72,70	68,70	-4,00	-5,50%	<a href="#">here</a>
1.A.3.a i(i)	11,77	11,84	0,07	0,61%	<a href="#">here</a>
1.A.3.a ii(i)	2,31	2,67	0,35	15,27%	<a href="#">here</a>
1.A.3.b i	286,10	294,97	8,87	3,10%	<a href="#">here</a>
1.A.3.b ii	60,49	60,37	-0,12	-0,20%	<a href="#">here</a>
1.A.3.b iii	119,39	116,30	-3,09	-2,59%	<a href="#">here</a>
1.A.3.b iv	1,63	1,66	0,03	1,59%	<a href="#">here</a>
1.A.3.c	8,71	7,49	-1,23	-14,07%	<a href="#">here</a>
1.A.3.d ii	26,09	27,28	1,20	4,60%	<a href="#">here</a>
1.A.3.e i	1,50	1,50	0,01	0,45%	<a href="#">here</a>
1.A.4.a i	20,12	18,60	-1,52	-7,54%	<a href="#">here</a>
1.A.4.a ii	9,92	8,15	-1,77	-17,86%	<a href="#">here</a>
1.A.4.b i	52,65	54,48	1,83	3,49%	<a href="#">here</a>
1.A.4.b ii	0,499	0,501	0,002	0,32%	<a href="#">here</a>
1.A.4.c i	6,07	5,84	-0,23	-3,80%	<a href="#">here</a>
1.A.4.c ii	27,29	27,43	0,14	0,51%	<a href="#">here</a>
1.A.4.c iii	2,69	2,77	0,08	2,70%	<a href="#">here</a>
1.A.5.a	0,25	0,25	0,00	0,22%	<a href="#">here</a>
1.A.5.b	2,87	2,87	0,00	0,07%	<a href="#">here</a>
1.B.1.b	0,64	0,65	0,01	1,55%	<a href="#">here</a>
<b>NFR 2 - IPPU</b>	<b>86,70</b>	<b>86,82</b>	<b>0,12</b>	<b>0,14%</b>	sub-category chapters
2.A.3	11,71	11,51	-0,20	-1,67%	<a href="#">here</a>
2.C.3	NA	0,53	0,53		<a href="#">here</a>
2.G	0,436	0,222	-0,214	-49,14%	<a href="#">here</a>
<b>NFR 3 - Agriculture</b>	<b>118,64</b>	<b>115,69</b>	<b>-2,95</b>	<b>-2,49%</b>	sub-category chapters
3.B.1.a	0,520	0,488	-0,032	-6,21%	<a href="#">here</a>
3.B.1.b	0,566	0,497	-0,070	-12,31%	<a href="#">here</a>
3.B.3	0,3340	0,3352	0,0013	0,38%	<a href="#">here</a>
3.B.4.g i	0,0180	0,0178	-0,0001	-0,65%	<a href="#">here</a>
3.B.4.g ii	0,0180	0,0180	0,0000	-0,20%	<a href="#">here</a>
3.B.4.g iii	0,0108	0,0108	-0,0001	-0,67%	<a href="#">here</a>
3.B.4.g iv	0,0020	0,0020	0,0000	-0,72%	<a href="#">here</a>
3.D.a.1	59,01	59,11	0,10	0,17%	<a href="#">here</a>
3.D.a.2.a	39,94	37,80	-2,14	-5,35%	<a href="#">here</a>
3.D.a.2.b	0,56	0,51	-0,05	-8,55%	<a href="#">here</a>
3.D.a.2.c	11,77	11,55	-0,22	-1,91%	<a href="#">here</a>
3.D.a.3	5,66	5,13	-0,54	-9,47%	<a href="#">here</a>
3.I	0,177	0,172	-0,005	-2,68%	<a href="#">here</a>
<b>NFR 5 - Waste</b>	<b>0,830</b>	<b>0,830</b>	<b>0,000</b>	<b>0,00%</b>	
<b>NFR 6 - Other</b>		<b>NA</b>			