

# Recalculations - Ammonia

## Revision of NH<sub>3</sub> emissions over time:

The small changes within the **National Total** reported for **1990 (+7.4 kt or +1 %)** result almost entirely from **newly implemented emission estimates from NFR 6 (+ 8 kt)** together with less significant changes throughout NFRs 1 and 3.

The most significant percental change occurs for **NFR 5.B.1 with plus 109 %**.

Table 1: Changes in emission estimates for 1990

| NFR Sector                 | Submission 2022 | Submission 2023 | Difference   |               | Reasoning<br>see description and reasoning in: |
|----------------------------|-----------------|-----------------|--------------|---------------|--|
|                            | [kt]            |                 | absolute     | relative      |  |
| <b>NATIONAL TOTAL</b>      | <b>718,16</b>   | <b>725,52</b>   | <b>7,36</b>  | <b>1,02%</b>  | <b>sub-category chapters</b>                   |
| <b>NFR 1 - Energy</b>      | <b>15,54</b>    | <b>15,89</b>    | <b>0,35</b>  | <b>2,28%</b>  | <b>sub-category chapters</b>                   |
| 1.A.2.g vii                | 0,00789         | 0,00790         | 0,00001      | 0,14%         | <a href="#">here</a>                           |
| 1.A.3.a i(i)               | 0,053           | 0,049           | -0,003       | -6,58%        | <a href="#">here</a>                           |
| 1.A.3.a ii(i)              | 0,037           | 0,035           | -0,002       | -6,58%        | <a href="#">here</a>                           |
| 1.A.3.b i                  | 7,37            | 7,73            | 0,36         | 4,92%         | <a href="#">here</a>                           |
| 1.A.3.b ii                 | 0,023           | 0,024           | 0,001        | 3,84%         | <a href="#">here</a>                           |
| 1.A.3.b iii                | 0,085           | 0,080           | -0,004       | -4,99%        | <a href="#">here</a>                           |
| 1.A.3.b iv                 | 0,027           | 0,028           | 0,001        | 3,84%         | <a href="#">here</a>                           |
| 1.A.4.a ii                 | 0,001799        | 0,001797        | -0,000002    | -0,11%        | <a href="#">here</a>                           |
| 1.A.4.b ii                 | 0,000160        | 0,000160        | 0,000000     | -0,02%        | <a href="#">here</a>                           |
| 1.A.4.c ii                 | 0,00882         | 0,00881         | -0,00001     | -0,16%        | <a href="#">here</a>                           |
| <b>NFR 2 - IPPU</b>        | <b>14,68</b>    | <b>14,68</b>    | <b>0,00</b>  | <b>0,00%</b>  |  |
| <b>NFR 3 - Agriculture</b> | <b>687,79</b>   | <b>686,62</b>   | <b>-1,17</b> | <b>-0,17%</b> | <b>sub-category chapters</b>                   |
| 3.B.1.a                    | 62,19           | 62,10           | -0,09        | -0,14%        | <a href="#">here</a>                           |
| 3.B.1.b                    | 91,43           | 81,36           | -10,07       | -11,02%       | <a href="#">here</a>                           |
| 3.B.3                      | 121,81          | 120,10          | -1,71        | -1,41%        | <a href="#">here</a>                           |
| 3.B.4.g i                  | 11,31           | 11,41           | 0,10         | 0,91%         | <a href="#">here</a>                           |
| 3.D.a.2.a                  | 275,21          | 285,58          | 10,37        | 3,77%         | <a href="#">here</a>                           |
| 3.D.a.2.c                  | 0,01            | 0,24            | 0,23         | 2,11%         | <a href="#">here</a>                           |
| 3.D.a.3                    | 22,23           | 22,24           | 0,01         | 0,05%         | <a href="#">here</a>                           |
| <b>NFR 5 - Waste</b>       | <b>0,16</b>     | <b>0,34</b>     | <b>0,18</b>  | <b>109%</b>   | <b>sub-category chapters</b>                   |
| 5.B.1                      | 0,16            | 0,34            | 0,18         | 109%          | <a href="#">here</a>                           |
| <b>NFR 6 - Other</b>       | <b>0,00</b>     | <b>8,00</b>     | <b>8,00</b>  |               |  |

Changes within the **National Total** reported for **2020 (-7.49 kt | -1.4 %)** result mainly from several larger revisions in **NFR 3 (-17.2 kt) and newly implemented emission estimates from NFR 6 (+ 8 kt)** together with less significant changes throughout NFRs 1, 2 and 5.

The most significant relative change occurs for **NFR 1.A.4.a i with plus 38 %**.

Table 2: Changes in emission estimates for 2019

| NFR Sector            | Submission 2022 | Submission 2023 | Difference   |               | Reasoning<br>see description and reasoning in: |
|-----------------------|-----------------|-----------------|--------------|---------------|--|
|                       | [kt]            |                 | absolute     | relative      |  |
| <b>NATIONAL TOTAL</b> | <b>537,27</b>   | <b>529,78</b>   | <b>-7,49</b> | <b>-1,39%</b> | <b>sub-category chapters</b>                   |
| <b>NFR 1 - Energy</b> | <b>12,31</b>    | <b>13,20</b>    | <b>0,89</b>  | <b>7,19%</b>  | <b>sub-category chapters</b>                   |
| 1.A.1.a               | 0,62            | 0,60            | -0,02        | -3,18%        | <a href="#">here</a>                           |
| 1.A.1.b               | 0,541           | 0,545           | 0,004        | 0,80%         | <a href="#">here</a>                           |
| 1.A.1.c               | 0,0243          | 0,0246          | 0,0002       | 0,96%         | <a href="#">here</a>                           |
| 1.A.2.a               | 0,095           | 0,093           | -0,002       | -1,83%        | <a href="#">here</a>                           |
| 1.A.2.b               | 0,0063          | 0,0070          | 0,001        | 12,16%        | <a href="#">here</a>                           |
| 1.A.2.e               | 0,0018          | 0,0012          | -0,0006      | -33,75%       | <a href="#">here</a>                           |
| 1.A.2.f               | 0,0218          | 0,0215          | -0,0003      | -1,34%        | <a href="#">here</a>                           |

|                            | Submission 2022 | Submission 2023 | Difference    |                                   | Reasoning                    |
|----------------------------|-----------------|-----------------|---------------|-----------------------------------|------------------------------|
| NFR Sector                 | [kt]            |                 | relative      | see description and reasoning in: |                              |
| <b>NATIONAL TOTAL</b>      | <b>537,27</b>   | <b>529,78</b>   | <b>-7,49</b>  | <b>-1,39%</b>                     | <b>sub-category chapters</b> |
| <b>NFR 1 - Energy</b>      | <b>12,31</b>    | <b>13,20</b>    | <b>0,89</b>   | <b>7,19%</b>                      | <b>sub-category chapters</b> |
| 1.A.2.g vii                | 0,0083          | 0,0085          | 0,0002        | 2,07%                             | <a href="#">here</a>         |
| 1.A.2.g viii               | 0,365           | 0,369           | 0,003         | 0,95%                             | <a href="#">here</a>         |
| 1.A.3.a i(i)               | 0,058           | 0,054           | -0,004        | -6,63%                            | <a href="#">here</a>         |
| 1.A.3.a ii(i)              | 0,015           | 0,014           | -0,001        | -6,73%                            | <a href="#">here</a>         |
| 1.A.3.b i                  | 7,59            | 8,36            | 0,77          | 10,13%                            | <a href="#">here</a>         |
| 1.A.3.b ii                 | 0,197           | 0,220           | 0,023         | 11,64%                            | <a href="#">here</a>         |
| 1.A.3.b iii                | 0,743           | 0,726           | -0,017        | -2,30%                            | <a href="#">here</a>         |
| 1.A.3.b iv                 | 0,0221          | 0,0224          | 0,0003        | 1,14%                             | <a href="#">here</a>         |
| 1.A.3.c                    | 0,007           | 0,008           | 0,000         | 5,20%                             | <a href="#">here</a>         |
| 1.A.3.d ii                 | 0,0052          | 0,0052          | 0,0000        | -0,01%                            | <a href="#">here</a>         |
| 1.A.4.a i                  | 0,36            | 0,50            | 0,14          | 37,57%                            | <a href="#">here</a>         |
| 1.A.4.a ii                 | 0,001875        | 0,001884        | 0,000009      | 0,48%                             | <a href="#">here</a>         |
| 1.A.4.b i                  | 1,531           | 1,524           | -0,01         | -0,40%                            | <a href="#">here</a>         |
| 1.A.4.b ii                 | 0,00038         | 0,00030         | -0,00008      | -21,40%                           | <a href="#">here</a>         |
| 1.A.4.c i                  | 0,052           | 0,050           | -0,003        | -5,09%                            | <a href="#">here</a>         |
| 1.A.4.c ii                 | 0,0101          | 0,0102          | 0,0001        | 1,40%                             | <a href="#">here</a>         |
| 1.A.5.a                    | 0,00373         | 0,00375         | 0,00001       | 0,39%                             | <a href="#">here</a>         |
| 1.A.5.b                    | 0,01966         | 0,01963         | -0,00003      | -0,16%                            | <a href="#">here</a>         |
| 1.B.1.b                    | 0,00192         | 0,00193         | 0,00002       | 0,89%                             | <a href="#">here</a>         |
| <b>NFR 2 - IPPU</b>        | <b>9,139</b>    | <b>9,590</b>    | <b>0,45</b>   | <b>4,93%</b>                      | <b>sub-category chapters</b> |
| 2.A.1                      | 1,01            | 1,11            | 0,10          | 9,45%                             | <a href="#">here</a>         |
| 2.A.3                      | 1,10            | 1,13            | 0,03          | 2,76%                             | <a href="#">here</a>         |
| 2.B.7                      | 0,92            | 1,25            | 0,32          | 35,20%                            | <a href="#">here</a>         |
| 2.C.1                      | 0,075598        | 0,075595        | -0,000004     | -0,01%                            | <a href="#">here</a>         |
| <b>NFR 3 - Agriculture</b> | <b>512,27</b>   | <b>495,10</b>   | <b>-17,18</b> | <b>-3,35%</b>                     | <b>sub-category chapters</b> |
| 3.B.1.a                    | 59,09           | 54,85           | -4,24         | -7,17%                            | <a href="#">here</a>         |
| 3.B.1.b                    | 70,41           | 49,64           | -20,77        | -29,49%                           | <a href="#">here</a>         |
| 3.B.3                      | 84,75           | 78,56           | -6,19         | -7,30%                            | <a href="#">here</a>         |
| 3.B.4.g i                  | 8,17            | 6,80            | -1,36         | -16,70%                           | <a href="#">here</a>         |
| 3.B.4.g ii                 | 8,21            | 8,27            | 0,06          | 0,74%                             | <a href="#">here</a>         |
| 3.B.4.g iii                | 9,08            | 9,07            | -0,02         | -0,17%                            | <a href="#">here</a>         |
| 3.B.4.g iv                 | 1,54            | 1,53            | -0,01         | -0,38%                            | <a href="#">here</a>         |
| 3.D.a.1                    | 36,97           | 35,94           | -1,04         | -2,80%                            | <a href="#">here</a>         |
| 3.D.a.2.a                  | 158,67          | 170,65          | 11,98         | 7,55%                             | <a href="#">here</a>         |
| 3.D.a.2.b                  | 1,90            | 1,67            | -0,23         | -12,25%                           | <a href="#">here</a>         |
| 3.D.a.2.c                  | 50,12           | 54,33           | 4,21          | 8,40%                             | <a href="#">here</a>         |
| 3.D.a.3                    | 12,30           | 12,68           | 0,38          | 3,12%                             | <a href="#">here</a>         |
| 3.l                        | 3,14            | 3,18            | 0,04          | 1,16%                             | <a href="#">here</a>         |
| <b>NFR 5 - Waste</b>       | <b>3,54</b>     | <b>3,55</b>     | <b>0,01</b>   | <b>0,32%</b>                      | <b>sub-category chapters</b> |
| 5.B.1                      | 1,96            | 2,03            | 0,07          | 3,70%                             | <a href="#">here</a>         |
| 5.B.2                      | 1,59            | 1,53            | -0,06         | -3,84%                            | <a href="#">here</a>         |
| <b>NFR 6 - Other</b>       | <b>0,00</b>     | <b>8,34</b>     | <b>8,34</b>   |                                   |                              |
| 6.A                        | NA              | 8,34            | 8,34          |                                   | <a href="#">here</a>         |