

Recalculations - Copper (Cu)

With negligibly small changes within NFRs 1 and 2 and re-allocations in sub-categories of 1.A.3.b, the **1990 National Total remains unaltered** compared to last year's submission.

However, the strongest percental change occurs in NFR **1.A.3.b ii with plus 26 %**.

Table 1: Changes in emission estimates for 1990

| NFR Sector | Submission 2022 | Submission 2023 | Difference | | Reasoning |
|----------------------------|-----------------|-----------------|-------------|--------------|-----------------------------------|
| | [t] | | | relative | see description and reasoning in: |
| NATIONAL TOTAL | 619,88 | 619,88 | 0,00 | 0,00% | sub-category chapters |
| NFR 1 - Energy | 538,01 | 538,01 | 0,00 | 0,00% | sub-category chapters |
| 1.A.2.g vii | 0,00653 | 0,00654 | 0,00001 | 0,17% | here |
| 1.A.3.b i | 0,1656 | 0,1669 | 0,0013 | 0,76% | here |
| 1.A.3.b ii | 0,0063 | 0,0080 | 0,0016 | 25,99% | here |
| 1.A.3.b iii | 0,0609 | 0,0580 | -0,0030 | -4,87% | here |
| 1.A.3.b iv | 0,0022 | 0,0023 | 0,0001 | 2,99% | here |
| 1.A.4.a ii | 0,001041 | 0,001040 | -0,000001 | -0,09% | here |
| 1.A.4.b ii | 0,5743 | 0,5744 | 0,0001 | 0,02% | here |
| 1.A.4.c ii | 1,1130 | 1,1129 | -0,0001 | -0,01% | here |
| NFR 2 - IPPU | 81,81 | 81,80 | 0,00 | 0,00% | sub-category chapters |
| 2.G | 36,272 | 36,268 | -0,004 | -0,01% | here |
| NFR 3 - Agriculture | NA | | | | |
| NFR 5 - Waste | 0,07 | 0,07 | 0,00 | 0,00% | |
| NFR 6 - Other | NA | | | | |

The changes in the **National Total** reported for **2020 (+5.13 t and +1 %)** are dominated by a revision in **NFR 1.A.3.c with plus 6.77 t** where annual mileage and, hence, abrasive emissions were revised for 2020.

The significant percental change occurring in NFR 1.A.3.b iii results from a data error that will be corrected with the next annual submission.

Table 2: Changes of emission estimates for 2020

| NFR Sector | Submission 2022 | Submission 2023 | Difference | | Reasoning |
|-----------------------|-----------------|-----------------|---------------|--------------|-----------------------------------|
| | [t] | | | relative | see description and reasoning in: |
| NATIONAL TOTAL | 524,59 | 529,72 | 5,13 | 0,98% | sub-category chapters |
| NFR 1 - Energy | 469,12 | 474,36 | 5,24 | 1,12% | sub-category chapters |
| 1.A.1.a | 5,85 | 5,81 | -0,04 | -0,67% | here |
| 1.A.1.b | 3,84 | 3,73 | -0,10 | -2,72% | here |
| 1.A.1.c | 0,058 | 0,054 | -0,004 | -7,46% | here |
| 1.A.2.g vii | 0,0067 | 0,0069 | 0,0002 | 2,41% | here |
| 1.A.2.g viii | 0,30 | 0,37 | 0,06 | 21,11% | here |
| 1.A.3.a i(i) | 0,0000000991 | 0,0000000987 | -0,0000000004 | -0,42% | here |
| 1.A.3.a ii(i) | 0,000002560 | 0,000002561 | 0,000000001 | 0,03% | here |
| 1.A.3.b i | 0,1414 | 0,1420 | 0,0006 | 0,39% | here |
| 1.A.3.b ii | 0,0214 | 0,0218 | 0,0005 | 2,17% | here |
| 1.A.3.b iii | 0,0839 | 0,0286 | -0,0553 | -65,91% | here |
| 1.A.3.b iv | 0,00196 | 0,00198 | 0,00002 | 1,11% | here |
| 1.A.3.b vi | 358,94 | 357,42 | -1,52 | -0,42% | here |
| 1.A.3.b vii | 0,03433 | 0,03432 | -0,00002 | -0,05% | here |
| 1.A.3.c | 94,17 | 100,94 | <u>6,77</u> | 7,19% | here |
| 1.A.3.d ii | 0,5810 | 0,5810 | -0,0001 | -0,01% | here |
| 1.A.4.a i | 1,57 | 1,61 | 0,03 | 2,14% | here |
| 1.A.4.a ii | 0,00083 | 0,00084 | 0,00001 | 0,89% | here |
| 1.A.4.b i | 2,28 | 2,24 | -0,03 | -1,51% | here |

| | Submission 2022 | Submission 2023 | Difference | | Reasoning |
|----------------------------|-----------------|-----------------|-----------------|-----------------|--|
| NFR Sector | [t] | | | relative | see description and reasoning in: |
| NATIONAL TOTAL | 524,59 | 529,72 | 5,13 | 0,98% | sub-category chapters |
| NFR 1 - Energy | 469,12 | 474,36 | 5,24 | 1,12% | sub-category chapters |
| 1.A.4.b ii | 0,33 | 0,26 | -0,07 | -21,39% | here |
| 1.A.4.c i | 0,08384 | 0,08383 | -0,00001 | -0,01% | here |
| 1.A.4.c ii | 0,80 | 1,01 | 0,20 | 25,47% | here |
| NFR 2 - IPPU | 55,40068 | 55,29302 | -0,10766 | -0,19% | sub-category chapters |
| 2.A.3 | 0,05840 | 0,05845 | 0,00005 | 0,08% | here |
| 2.G | 37,87183 | 37,76412 | -0,10771 | -0,28% | here |
| NFR 3 - Agriculture | NA | | | | |
| NFR 5 - Waste | 0,07 | 0,07 | 0,00 | 0,00% | |
| NFR 6 - Other | NA | | | | |
| | Submission 2021 | Submission 2022 | Difference | | Reasoning |
| NFR Sector | [t] | | | relative | see description and reasoning in: |
| NATIONAL TOTAL | 587,38 | 591,28 | 3,91 | 0,67% | sub-category chapters |
| NFR 1 - Energy | 517,86 | 517,93 | 0,07 | 0,01% | sub-category chapters |
| 1.A.1.a | 7,00 | 7,11 | 0,11 | 1,50% | here |
| 1.A.1.b | 4,05 | 3,94 | -0,11 | -2,74% | here |
| 1.A.1.c | 0,058 | 0,056 | 0,00 | -2,95% | here |
| 1.A.2.g vii | 0,00646 | 0,00647 | 0,00001 | 0,08% | here |
| 1.A.2.g viii | 0,329 | 0,326 | -0,003 | -0,89% | here |
| 1.A.3.a i(i) | 0,0000011 | 0,0000002 | -0,0000009 | -83,52% | here |
| 1.A.3.a ii(i) | 0,000024 | 0,000004 | -0,000020 | -83,69% | here |
| 1.A.3.b i | 0,1616 | 0,1618 | 0,0001 | 0,08% | here |
| 1.A.3.b ii | 0,0220 | 0,0217 | -0,0002 | -1,10% | here |
| 1.A.3.b iii | 0,0868 | 0,0867 | -0,0001 | -0,15% | here |
| 1.A.3.b iv | 0,00194 | 0,00192 | -0,00002 | -1,10% | here |
| 1.A.3.c | 100,89 | 100,94 | 0,05 | 0,05% | here |
| 1.A.3.d ii | 0,60 | 0,65 | 0,05 | 9,14% | here |
| 1.A.4.a ii | 0,000810 | 0,000811 | 0,000001 | 0,18% | here |
| 1.A.4.b i | 2,379 | 2,380 | 0,001 | 0,03% | here |
| 1.A.4.b ii | 0,34 | 0,35 | 0,01 | 1,85% | here |
| 1.A.4.c ii | 0,656 | 0,644 | -0,012 | -1,82% | here |
| 1.A.4.c iii | 0,0105 | 0,0066 | -0,0039 | -37,07% | here |
| 1.A.5.b | 0,012 | 0,004 | -0,008 | -68,89% | here |
| NFR 2 - IPPU | 69,45 | 73,28 | 3,83 | 5,52% | sub-category chapters |
| 2.A.3 | 0,413 | 0,065 | -0,35 | -84,30% | here |
| 2.G | 52,59 | 56,77 | 4,18 | 7,95% | here |
| NFR 3 - Agriculture | NA | | | | |
| NFR 5 - Waste | 0,07 | 0,07 | 0,00 | 0,00% | |
| NFR 6 - Other | NA | | | | |