Annex 2. Trends and projections in Danish GHG

emissions and removals 1990-2040

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GREENHOUSE** **GAS** **EMISSIONS** | **1990** | **1995** | **2000** | | | | **2005** | | | **2010** | **2015** | **2020** | **2021** | | **2025** | **2030** | **2035** | **2040** | |
|  |  |  | C |  |  |  | |  | CO2 equivalent (kt) | | | | | CO2 equivalent (kt) | | | | | |
| CO2 emissions without net CO2 from LULUCF | 53477 | 61653 | 54307 | | | | 51535 | | | 49190 | 35111 | 28300 | 29608 | | 21329 | 12891 | 10384 | 9068 | |
| CO2 emissions with net CO2 from LULUCF | 60017 | 66734 | 59141 | | | | 56356 | | | 51386 | 35635 | 31073 | 31697 | | 26033 | 16362 | 13646 | 12715 | |
| CH4 emissions without CH4 from LULUCF | 9107 | 9617 | 9578 | | | | 9352 | | | 8962 | 8451 | 8559 | 8553 | | 7531 | 7025 | 6731 | 6943 | |
| CH4 emissions with CH4 from LULUCF | 9401 | 9904 | 9861 | | | | 9632 | | | 9243 | 8732 | 8848 | 8843 | | 7889 | 7552 | 7270 | 7482 | |
| N2O emissions without N2O from LULUCF | 7768 | 6927 | 6495 | | | | 5361 | | | 5172 | 5204 | 5388 | 5116 | | 4859 | 4573 | 4524 | 4477 | |
| N2O emissions with N2O from LULUCF | 7831 | 6987 | 6546 | | | | 5403 | | | 5210 | 5247 | 5428 | 5156 | | 4901 | 4618 | 4572 | 4527 | |
| HFCs | 0 | 238 | 728 | | | | 870 | | | 807 | 450 | 317 | 275 | | 329 | 241 | 155 | 83 | |
| PFCs | 0 | 1 | 23 | | | | 19 | | | 10 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Unspecified mix of HFCs and PFCs | NO,NA | NO,NA | NO,NA | | | | NO,NA | | | NO,NA | NO,NA | NO,NA | NO,NA | | NO,NA | NO,NA | NO,NA | NO,NA | |
| SF6 | 44 | 107 | 59 | | | | 21 | | | 38 | 125 | 47 | 15 | | 14 | 15 | 15 | 16 | |
| NF3 | NO,NA | NO,NA | NO,NA | | | | NO,NA | | | NO,NA | NO,NA | NO,NA | NO,NA | | NO,NA | NO,NA | NO,NA | NO,NA | |
| ***Total (without LULUCF)*** | ***70396*** | ***78543*** | ***71190*** | | | | ***67158*** | | | ***64177*** | ***49340*** | ***42611*** | ***43567*** | | ***34063*** | ***24744*** | ***21809*** | ***20587*** | |
| ***Total (with LULUCF)*** | ***77292*** | ***83970*** | ***76358*** | | | | ***72302*** | | | ***66694*** | ***50189*** | ***45713*** | ***45987*** | | ***39166*** | ***28788*** | ***25658*** | ***24822*** | |
| **Total (without LULUCF, with indirect CO2)** | **71516** | **79602** | **72028** | | | | **67844** | | | **64668** | **49658** | **42853** | **43812** | | **34263** | **24923** | **21968** | **20726** | |
| ***Total (with LULUCF,  with indirect CO2 )*** | ***78412*** | ***85029*** | ***77197*** | | | | ***72988*** | | | ***67185*** | ***50507*** | ***45955*** | ***46233*** | | ***39367*** | ***28967*** | ***25817*** | ***24962*** | |
| **GREENHOUSE** **GAS** **SOURCE** **AND** **SINK** **CATEGORIES** | **1990** | **1995** | **2000** | | | | **2005** | | | **2010** | **2015** | **2020** | **2021** | | **2025** | **2030** | **2035** | **2040** | |
| CO2 equivalent (kt) |  |  |  |  | CO2 equivalent (kt) | | | | | | | |  | CO2 equivalent (kt) | | | | |  |
| 1. Energy (with indirect CO2) | 53501 | 61573 | 54376 | | | | 51465 | | | 49516 | 34622 | 27157 | 28553 | | 21400 | 15386 | 12264 | 9027 | |
| 2. Industrial processes and product use | 2143 | 2838 | 3573 | | | | 2751 | | | 1882 | 1821 | 1907 | 1851 | | 1719 | 1376 | 1316 | 1276 | |
| 3. Agriculture | 13896 | 13453 | 12674 | | | | 12432 | | | 12085 | 12029 | 12389 | 12074 | | 11096 | 10394 | 10179 | 9915 | |
| 4. Land use, land-use change and forestry | 6897 | 5427 | 5168 | | | | 5144 | | | 2517 | 849 | 3102 | 2420 | | 5103 | 4044 | 3849 | 4236 | |
| 5. Waste | 1975 | 1643 | 1394 | | | | 1171 | | | 1053 | 1050 | 1184 | 1196 | | 948 | 967 | 910 | 1408 | |
| 6. Other | NO | NO | NO | | | | NO | | | NO | NO | NO | NO | | NO | NO | NO | NO | |
| **GREENHOUSE** **GAS** **EMISSIONS in** **EU** **ETS** **and** **non-ETS** **SECTOR** **CATEGORIES** | **1990** | **1995** | **2000** | | | | **2005** | | | **2010** | **2015** | **2020** | **2021** | | **2025** | **2030** | **2035** | **2040** | |
|  |  |  |  |  | CO2 equivalent (kt) | | | | | | | |  | CO2 equivalent (kt) | | | | |  |
| EU ETS (CO2 emissions from stationary installations also included in the inventory) [1990-2004: No PROXY estimates] | NO | NO | NO | | | | 26864 | | | 25269 | 15796 | 10833 | 11619 | | 6256 | 3563 | 3039 | 2834 | |
| EU ETS (CO2 emissions from domestic aviation also included in the inventory) | NO | NO | NO | | | | 0 | | | 0 | 137 | 78 | 85 | | 131 | 138 | 140 | 142 | |
| **EU ETS (Total CO2 emissions in ETS also included in the inventory) [1990-2004: No PROXY estimates]** | NO | NO | NO | | | | **26864** | | | **25269** | **15933** | **10911** | **11704** | | **6387** | **3701** | **3180** | **2976** | |
| **Non-ETS GHG emissions, without LULUCF, with indirect CO2 (2013-2020: ESD / 2021-2030: ESR) [1990-2004: No PROXY estimates]** | NO | NO | NO | | | | **40980** | | | **39400** | **33725** | **31942** | **32108** | | **28776** | **24422** | **21489** | **18650** | |
| **GREENHOUSE** **GAS** **NET** **EMISSIONS** **and** **ACCOUNTING** **QUANTITIES** **in** **the** **LULUCF** **SECTOR** | **1990** | **1995** | **2000** | | | | **2005** | | | **2010** | **2015** | **2020** | **2021** | | **2025** | **2030** | **2035** | **2040** | |
|  |  |  |  |  | CO2 equivalent (kt) | | | | | | | |  | CO2 equivalent (kt) | | | | |  |
| **LULUCF under the UNFCCC (net emissions from "4. Land use, land-use change and forestry")** | **13793** | **10854** | **10336** | | | | **10288** | | | **5034** | **1698** | **6203** | **4840** | | **10207** | **8088** | **7698** | **8472** | |
| **LULUCF accounting quantities (net credits if negative): KP1(2008-2012), KP2(2013-2020), EU/LULUCF(2021-2030)** | **NA** | **NA** | **NA** | | | | **NA** | | | **NA** | **NA** | **NA** | **-3960** | | **-1117** | **1953** | **NE** | **NE** | |
| **GREENHOUSE** **GAS** **EMISSIONS in** **the** **different** **ENERGY** **SECTORS** | **1990** | **1995** | **2000** | | | | **2005** | | | **2010** | **2015** | **2020** | **2021** | | **2025** | **2030** | **2035** | **2040** | |
|  |  |  |  |  | CO2 equivalent (kt) | | | | | | | |  | CO2 equivalent (kt) | | | | |  |
| **1. Energy (with indirect CO2)** | 53501 | 61573 | 54376 | | | | 51465 | | | 49516 | 34622 | 27157 | 28553 | | 21400 | 15386 | 12264 | 9027 | |
| A. Fuel combustion (sectoral approach) (with indirect CO2) | 52967 | 60848 | 53256 | | | | 50523 | | | 48899 | 34205 | 26947 | 28366 | | 21228 | 15199 | 12096 | 8876 | |
| 1. Energy industries (with indirect CO2) | 26350 | 32716 | 26284 | | | | 23374 | | | 24173 | 12897 | 7210 | 8375 | | 4314 | 2539 | 2024 | 1889 | |
| 2. Manufacturing industries and construction | 5876 | 6352 | 6144 | | | | 5737 | | | 4432 | 3654 | 3581 | 3742 | | 2562 | 1009 | 835 | 653 | |
| 3. Transport | 11557 | 12788 | 12983 | | | | 13964 | | | 13646 | 12736 | 12112 | 12309 | | 11925 | 10243 | 7957 | 5090 | |
| 4. Other sectors | 9004 | 8656 | 7630 | | | | 7054 | | | 6429 | 4720 | 3799 | 3714 | | 2229 | 1213 | 1084 | 1048 | |
| 5. Other | 181 | 336 | 215 | | | | 394 | | | 218 | 198 | 246 | 226 | | 198 | 195 | 195 | 195 | |
| B. Fugitive emissions from fuels | 535 | 725 | 1119 | | | | 943 | | | 617 | 417 | 210 | 187 | | 173 | 187 | 168 | 150 | |
| 1. Solid fuels | NO | NO | NO | | | | NO | | | NO | NO | NO | NO | | NO | NO | NO | NO | |
| 2. Oil and natural gas and other emissions from energy production | 535 | 725 | 1119 | | | | 943 | | | 617 | 417 | 210 | 187 | | 173 | 187 | 168 | 150 | |
| C. CO2 transport and storage | NO | NO | NO | | | | NO | | | NO | NO | NO | NO | | NO | NO | NO | NO | |

Trends and projections in Danish GHG emissions and removals 1990-2040 with the effects of existing national and EU policies and measures as of May 2023 (the WEM scenario) - by gas, by IPCC sectors, in the EU ETS, in EU non-ETS (ESD/ESR), the LULUCF sector and different energy sectors.