

Historical GHG Emissions Summary
Newfoundland and Labrador, 1990-2019 ¹
(kt CO₂ equivalent)

| National Inventory Report (NIR) Greenhouse Gas Categories | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|----------|---|
| NIR TOTAL EMISSIONS ² | 9,549 | 8,506 | 8,432 | 8,584 | 7,658 | 8,637 | 8,753 | 9,312 | 10,641 | 9,686 | 9,242 | 9,959 | 11,998 | 11,824 | 11,119 | 10,521 | 10,122 | 11,094 | 10,618 | 10,073 | 9,996 | 10,294 | 9,836 | 9,951 | 10,940 | 11,020 | 11,228 | 11,144 | 10,943 | 11,091 | | |
| ENERGY | 8,674 | 7,625 | 7,520 | 7,643 | 6,691 | 7,634 | 7,746 | 8,287 | 9,606 | 8,651 | 8,198 | 8,933 | 10,984 | 10,723 | 9,919 | 9,500 | 9,124 | 10,095 | 9,619 | 9,120 | 8,995 | 9,254 | 8,796 | 8,944 | 9,955 | 10,494 | 10,230 | 10,108 | 9,894 | 10,069 | | |
| a. Stationary Combustion Sources | 5,446 | 4,554 | 4,503 | 4,504 | 3,563 | 4,552 | 4,568 | 4,266 | 4,312 | 4,373 | 5,052 | 5,722 | 5,709 | 5,285 | 4,689 | 4,123 | 5,048 | 4,676 | 4,618 | 4,462 | 4,400 | 4,027 | 4,450 | 4,995 | 4,994 | 5,153 | 5,010 | 4,481 | 4,695 | | | |
| Public Electricity and Heat Production | 1,641 | 1,301 | 1,504 | 1,365 | 727 | 1,276 | 1,186 | 1,243 | 1,050 | 828 | 822 | 1,711 | 1,898 | 1,588 | 1,289 | 819 | 640 | 1,040 | 876 | 777 | 690 | 790 | 769 | 867 | 1,206 | 1,340 | 1,523 | 1,529 | 1,127 | 1,138 | | |
| Petroleum Refining Industries | 1,033 | 1,020 | 861 | 1,035 | 464 | 949 | 1,091 | 1,129 | 891 | 1,022 | 1,028 | 986 | 1,144 | 1,092 | 1,124 | 948 | 974 | 1,035 | 784 | 1,065 | 994 | 811 | 947 | 881 | 851 | 963 | 1,108 | 892 | 859 | 932 | | |
| Mining and Upstream Oil and Gas Production | 1,160 | 771 | 720 | 656 | 1,006 | 990 | 1,030 | 1,182 | 1,175 | 1,327 | 1,445 | 1,207 | 1,391 | 1,725 | 1,655 | 1,896 | 1,645 | 1,912 | 1,994 | 1,973 | 1,944 | 1,860 | 1,614 | 1,756 | 1,870 | 1,721 | 1,543 | 1,558 | 1,649 | 1,774 | | |
| Manufacturing Industries | 506 | 393 | 316 | 336 | 305 | 319 | 288 | 302 | 233 | 256 | 245 | 261 | 292 | 299 | 310 | 276 | 193 | 181 | 140 | 120 | 125 | 143 | 79 | 72 | 40 | 35 | 39 | 82 | 81 | 78 | | |
| Construction | 33 | 23 | 27 | 22 | 17 | 17 | 14 | 15 | 13 | 12 | 11 | 20 | 31 | 31 | 32 | 24 | 18 | 17 | 22 | 9 | 11 | 15 | 9 | 6 | 7 | 18 | 5 | 6 | 7 | 6 | | |
| Commercial and Institutional | 320 | 312 | 301 | 325 | 339 | 318 | 308 | 361 | 301 | 313 | 311 | 355 | 387 | 432 | 386 | 358 | 289 | 336 | 291 | 205 | 259 | 263 | 203 | 544 | 630 | 599 | 572 | 488 | 317 | 349 | | |
| Residential | 728 | 693 | 715 | 711 | 651 | 627 | 593 | 622 | 527 | 486 | 464 | 503 | 570 | 530 | 479 | 360 | 358 | 518 | 560 | 460 | 426 | 500 | 394 | 316 | 380 | 306 | 352 | 446 | 434 | 409 | | |
| Agriculture and Forestry | 24 | 41 | 59 | 54 | 53 | 56 | 57 | 74 | 74 | 68 | 47 | 9 | 11 | 10 | 8 | 6 | 8 | 9 | 8 | 11 | 18 | 11 | 8 | 11 | 12 | 10 | 9 | 7 | 9 | 9 | | |
| b. Transport ³ | 3,187 | 3,049 | 3,003 | 3,115 | 3,120 | 3,062 | 3,139 | 3,214 | 3,253 | 3,373 | 3,516 | 3,565 | 3,714 | 4,009 | 3,772 | 3,903 | 3,738 | 4,009 | 4,138 | 3,888 | 3,956 | 4,369 | 4,245 | 3,930 | 4,304 | 4,492 | 4,516 | 4,437 | 4,576 | 4,632 | | |
| Aviation | 238 | 234 | 231 | 209 | 217 | 217 | 247 | 257 | 269 | 287 | 297 | 264 | 291 | 372 | 364 | 340 | 303 | 313 | 315 | 288 | 289 | 287 | 310 | 303 | 312 | 307 | 303 | 280 | 289 | 280 | | |
| Road Transportation | 1,571 | 1,478 | 1,456 | 1,512 | 1,511 | 1,471 | 1,506 | 1,558 | 1,628 | 1,723 | 1,834 | 1,947 | 2,015 | 2,148 | 1,972 | 2,122 | 2,043 | 2,289 | 2,422 | 2,272 | 2,315 | 2,738 | 2,791 | 2,586 | 2,940 | 3,104 | 3,121 | 3,033 | 3,062 | 3,051 | | |
| Light-Duty Gasoline Vehicles | 678 | 656 | 655 | 653 | 641 | 619 | 603 | 584 | 578 | 593 | 599 | 612 | 622 | 613 | 560 | 604 | 574 | 656 | 688 | 632 | 623 | 693 | 730 | 629 | 679 | 684 | 640 | 627 | 589 | 551 | | |
| Light-Duty Gasoline Trucks | 440 | 434 | 443 | 452 | 465 | 470 | 479 | 483 | 497 | 530 | 552 | 572 | 595 | 617 | 593 | 646 | 636 | 758 | 820 | 783 | 816 | 958 | 1,063 | 956 | 1,090 | 1,156 | 1,162 | 1,222 | 1,209 | 1,195 | | |
| Heavy-Duty Gasoline Vehicles | 86 | 86 | 92 | 99 | 97 | 93 | 96 | 98 | 102 | 104 | 106 | 115 | 116 | 120 | 115 | 102 | 100 | 115 | 129 | 129 | 137 | 165 | 208 | 194 | 208 | 223 | 232 | 253 | 255 | 245 | | |
| Motorcycles | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 4 | 5 | 5 | 7 | 7 | 6 | 8 | 9 | 9 | 10 | 10 | 10 | | |
| Light-Duty Diesel Vehicles | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 4 | 5 | 6 | 6 | 5 | 5 | 6 | 8 | 6 | 6 | 7 | 8 | 8 | 6 | 6 | 6 | | |
| Light-Duty Diesel Trucks | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 5 | 6 | 8 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 5 | 4 | 6 | 8 | 10 | 10 | 11 | 12 | | |
| Heavy-Duty Diesel Vehicles | 358 | 295 | 259 | 302 | 303 | 284 | 322 | 386 | 444 | 486 | 567 | 636 | 670 | 782 | 690 | 756 | 719 | 744 | 769 | 713 | 723 | 903 | 771 | 790 | 943 | 1,016 | 1,059 | 903 | 982 | 1,033 | | |
| Propane and Natural Gas Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Railways | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Marine | 764 | 764 | 763 | 764 | 764 | 765 | 775 | 785 | 795 | 805 | 815 | 837 | 860 | 883 | 906 | 929 | 912 | 896 | 878 | 862 | 845 | 787 | 728 | 669 | 610 | 552 | 570 | 604 | 649 | 726 | | |
| Other Transportation | 614 | 574 | 552 | 630 | 627 | 610 | 612 | 615 | 561 | 558 | 570 | 517 | 548 | 606 | 531 | 513 | 479 | 511 | 522 | 467 | 507 | 556 | 416 | 372 | 442 | 530 | 522 | 521 | 576 | 575 | | |
| Off-Road Agriculture and Forestry | 25 | 22 | 21 | 27 | 28 | 27 | 28 | 30 | 31 | 29 | 30 | 34 | 31 | 37 | 33 | 34 | 32 | 34 | 33 | 29 | 32 | 29 | 21 | 19 | 21 | 26 | 23 | 22 | 26 | 28 | | |
| Off-Road Commercial and Institutional | 31 | 28 | 26 | 33 | 34 | 33 | 35 | 38 | 38 | 37 | 39 | 45 | 44 | 51 | 46 | 48 | 45 | 50 | 52 | 47 | 50 | 51 | 43 | 41 | 46 | 50 | 21 | 11 | 12 | 12 | | |
| Off-Road Manufacturing, Mining and Construction | 223 | 208 | 194 | 246 | 251 | 247 | 258 | 275 | 238 | 240 | 268 | 256 | 290 | 337 | 282 | 261 | 269 | 271 | 241 | 277 | 345 | 224 | 201 | 242 | 201 | 242 | 307 | 341 | 394 | 394 | | |
| Off-Road Residential | 7 | 7 | 6 | 8 | 8 | 9 | 10 | 12 | 13 | 15 | 16 | 19 | 22 | 24 | x | 25 | x | 28 | x | 28 | x | 30 | 28 | x | 28 | 30 | 29 | 29 | 29 | 30 | | |
| Off-Road Other Transportation | 328 | 309 | 304 | 316 | 307 | 294 | 280 | 260 | 241 | 237 | 217 | 163 | 161 | 156 | 145 | 124 | 118 | 132 | 138 | 125 | 124 | 101 | 99 | 86 | 105 | 117 | 114 | 117 | 116 | 111 | | |
| Pipeline Transport | - | - | - | - | - | - | - | - | - | - | - | - | - | - | x | - | x | - | x | - | x | - | - | - | - | - | - | - | - | - | - | |
| c. Fugitive Sources | 41 | 22 | 14 | 24 | 9 | 20 | 39 | 146 | 2,088 | 966 | 308 | 316 | 1,548 | 1,005 | 862 | 908 | 1,263 | 1,039 | 806 | 614 | 577 | 486 | 524 | 564 | 655 | 564 | 561 | 660 | 837 | 742 | | |
| Coal Mining | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Oil and Natural Gas | 41 | 22 | 14 | 24 | 9 | 20 | 39 | 146 | 2,088 | 966 | 308 | 316 | 1,548 | 1,005 | 862 | 908 | 1,263 | 1,039 | 806 | 614 | 577 | 486 | 524 | 564 | 655 | 564 | 561 | 660 | 837 | 742 | | |
| d. CO₂ Transport and Storage | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| INDUSTRIAL PROCESSES AND PRODUCT USE | 99 | 80 | 87 | 94 | 98 | 113 | 110 | 130 | 135 | 148 | 144 | 135 | 122 | 193 | 315 | 148 | 124 | 129 | 132 | 170 | 217 | 243 | 203 | 211 | 192 | 189 | 201 | 241 | 256 | 228 | | |
| a. Mineral Products | 65 | 51 | 59 | 61 | 70 | 73 | 69 | 83 | 81 | 75 | 2 | 2 | 1 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | | |
| Cement Production | 61 | 47 | 54 | 57 | 66 | 71 | 66 | 80 | 79 | 73 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Lime Production | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Mineral Products Use | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | |
| b. Chemical Industry ⁴ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Adipic Acid Production | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| c. Metal Production | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Iron and Steel Production | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Aluminum Production | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SF ₆ Used in Magnesium Smelters and Casters | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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(kt CO₂ equivalent)

| National Inventory Report (NIR) Greenhouse Gas Categories | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | |
|---|---------------|---------------|---------------|---------------|--------------|---------------|--------------|---------------|---------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
| NIR TOTAL EMISSIONS ² | 9,549 | 8,506 | 8,432 | 8,584 | 7,658 | 8,637 | 8,753 | 9,312 | 10,641 | 9,686 | 9,242 | 9,959 | 11,998 | 11,824 | 11,119 | 10,521 | 10,122 | 11,094 | 10,618 | 10,073 | 9,996 | 10,294 | 9,836 | 9,951 | 10,940 | 11,020 | 11,228 | 11,144 | 10,943 | 11,091 | |
| d. Incineration and Open Burning of Waste | 25 | 25 | 26 | 26 | 26 | 25 | 26 | 25 | 24 | 24 | 24 | 24 | 24 | 23 | 19 | 14 | 12 | 12 | 11 | 6 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| e. Industrial Wood Waste Landfills | 58 | 60 | 62 | 63 | 65 | 66 | 67 | 67 | 68 | 66 | 65 | 64 | 62 | 61 | 59 | 58 | 57 | 55 | 54 | 52 | 51 | 49 | 48 | 47 | 45 | 44 | 43 | 41 | 40 | 39 | |
| EMISSION RATIOS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Emissions per capita (t GHG/population) | 16.5 | 14.7 | 14.5 | 14.8 | 13.3 | 15.2 | 15.6 | 16.9 | 19.7 | 18.2 | 17.5 | 19.1 | 23.1 | 22.8 | 21.5 | 20.5 | 19.8 | 21.8 | 20.8 | 19.5 | 19.1 | 19.6 | 18.7 | 18.9 | 20.7 | 20.9 | 21.2 | 21.1 | 20.8 | 21.2 | |
| Emissions intensity (t GHG/\$m real 2007 GDP) ⁶ | 495 | 439 | 444 | 446 | 383 | 418 | 445 | 468 | 509 | 437 | 396 | 417 | 432 | 400 | 379 | 349 | 322 | 318 | 309 | 325 | 306 | 307 | 307 | 295 | 328 | 334 | 336 | 328 | 334 | 325 | |
| Emissions relative to 1990 (% change) ⁷ | | -10.9 | -11.7 | -10.1 | -19.8 | -9.6 | -8.3 | -2.5 | 11.4 | 1.4 | -3.2 | 4.3 | 25.6 | 23.8 | 16.4 | 10.2 | 6.0 | 16.2 | 11.2 | 5.5 | 4.7 | 7.8 | 3.0 | 4.2 | 14.6 | 15.4 | 17.6 | 16.7 | 14.6 | 16.1 | |
| Emissions relative to 2005 (% change) ⁸ | -9.2 | -19.2 | -19.9 | -18.4 | -27.2 | -17.9 | -16.8 | -11.5 | 1.1 | -7.9 | -12.2 | -5.3 | 14.0 | 12.4 | 5.7 | 0.0 | -3.8 | 5.4 | 0.9 | -4.3 | -5.0 | -2.2 | -6.5 | -5.4 | 4.0 | 4.7 | 6.7 | 5.9 | 4.0 | 5.4 | |
| NL emissions as share of Canadian total (%) | 1.6 | 1.4 | 1.4 | 1.4 | 1.2 | 1.3 | 1.3 | 1.3 | 1.5 | 1.4 | 1.3 | 1.4 | 1.7 | 1.6 | 1.5 | 1.4 | 1.4 | 1.5 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.6 | 1.6 | 1.5 | 1.5 | |
| LAND USE, LAND-USE CHANGE AND FORESTRY ⁹ | 4,248 | 3,243 | 2,546 | 2,740 | 1,957 | 1,705 | 1,213 | 888 | 997 | 634 | 605 | 160 | 17 | 259 | 97 | 43 | -314 | -460 | 106 | 42 | -290 | -691 | -1,015 | -472 | -263 | -276 | -300 | -493 | -52 | -264 | |
| Forest land | 2,648 | 1,642 | 820 | 883 | 211 | -200 | -610 | -1,002 | -701 | -1,041 | -1,163 | -1,358 | -1,506 | -1,043 | -1,376 | -1,467 | -1,709 | -1,921 | -1,368 | -1,465 | -1,669 | -1,970 | -2,203 | -1,751 | -1,812 | -1,833 | -1,885 | -1,992 | -1,471 | -1,603 | |
| Cropland | 17 | 17 | 18 | 19 | 20 | 20 | 20 | 21 | 21 | 21 | 22 | 22 | 24 | 25 | 26 | 27 | 28 | 27 | 28 | 28 | 28 | 28 | 29 | 28 | 26 | 26 | 25 | 25 | 24 | 24 | |
| Wetlands | 32 | 31 | 31 | 27 | 27 | 3 | 3 | 17 | 48 | 31 | 29 | 25 | 25 | 23 | 22 | 20 | 19 | 18 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | |
| Settlements | 84 | 71 | 74 | 69 | 67 | 65 | 70 | 66 | 66 | 63 | 66 | 65 | 72 | 70 | 64 | 65 | 64 | 65 | 69 | 72 | 68 | 71 | 89 | 185 | 357 | 430 | 411 | 268 | 250 | 240 | |
| Harvested Wood Products | 1,467 | 1,482 | 1,604 | 1,742 | 1,633 | 1,817 | 1,729 | 1,786 | 1,563 | 1,559 | 1,651 | 1,406 | 1,403 | 1,185 | 1,362 | 1,398 | 1,284 | 1,351 | 1,370 | 1,401 | 1,276 | 1,174 | 1,064 | 1,062 | 1,160 | 1,094 | 1,144 | 1,199 | 1,139 | 1,070 | |
| TOTAL EMISSIONS INCLUDING LAND USE, LAND USE CHANGE AND FORESTRY | 13,797 | 11,748 | 10,978 | 11,324 | 9,615 | 10,342 | 9,967 | 10,200 | 11,638 | 10,321 | 9,847 | 10,120 | 12,015 | 12,082 | 11,216 | 10,564 | 9,808 | 10,634 | 10,723 | 10,115 | 9,706 | 9,604 | 8,821 | 9,479 | 10,677 | 10,744 | 10,928 | 10,650 | 10,891 | 10,826 | |

Source: Environment Canada

Emissions per capita and emissions intensity calculated using Statistics Canada population and GDP estimates.

Footnotes:

1. Data may be subject to further revisions in subsequent years
 2. NIR total emissions exclude all GHGs from the Land Use, Land-use Change and Forestry sector.
 3. Emissions from ethanol and biodiesel are included in the Transport categories using gasoline and diesel respectively.
 4. Emissions from Ammonia Production, Nitric Acid Production and Petrochemical Production and Carbon Black categories are included in Non-Energy Products from Fuels and Solvent Use as CO₂ eq values within provincial/territorial tables.
 5. Emission estimates from consumption of PFCs and NF₃, as well as emissions of SF₆ from semi-conductor manufacturing, are only available at the national level.
HFC and PFC consumption began in 1995; HFC emissions occurring as a by-product of HCFC production (HCFC-22 exclusively) only occurred in Canada from 1990 - 1992 and PFC emissions prior to 1995 are the result of by-product CF₄ emissions from the use of NF₃.
 6. Based on chained 2012 dollars.
 7. The province has endorsed the Forum of New England Governors and Eastern Canadian Premiers regional targets on a provincial basis: (i) 2010 level to return to the 1990 level; and (ii) 2020 level to be 10% below the 1990 level.
 8. The province has established a provincial target for 2030 equal to 30% below 2005 levels, which is the same as the federal target.
 9. Land use, land use change and forestry estimated on an IPCC basis including forestry, croplands, wetlands, settlements and harvested wood products. These data are not published in the provincial estimates section of the National Inventory Report.
- Indicates no emissions
x Indicates data has been suppressed to respect confidentiality