

**Historical GHG Emissions Summary**  
**Newfoundland and Labrador, 1990-2018 <sup>1</sup>**  
**(kt CO<sub>2</sub> 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	
<b>NIR TOTAL EMISSIONS <sup>2</sup></b>	<b>9,777</b>	<b>8,695</b>	<b>8,599</b>	<b>8,746</b>	<b>7,790</b>	<b>8,713</b>	<b>8,808</b>	<b>9,343</b>	<b>10,658</b>	<b>9,703</b>	<b>9,259</b>	<b>9,995</b>	<b>11,989</b>	<b>11,773</b>	<b>11,062</b>	<b>10,453</b>	<b>10,107</b>	<b>11,073</b>	<b>10,628</b>	<b>10,078</b>	<b>10,016</b>	<b>10,271</b>	<b>9,871</b>	<b>9,960</b>	<b>10,878</b>	<b>10,929</b>	<b>11,143</b>	<b>11,037</b>	<b>11,009</b>	
<b>ENERGY</b>	<b>8,936</b>	<b>7,875</b>	<b>7,767</b>	<b>7,911</b>	<b>6,957</b>	<b>7,876</b>	<b>7,979</b>	<b>8,504</b>	<b>9,816</b>	<b>8,859</b>	<b>8,408</b>	<b>9,164</b>	<b>11,169</b>	<b>10,862</b>	<b>10,052</b>	<b>9,640</b>	<b>9,314</b>	<b>10,268</b>	<b>9,810</b>	<b>9,313</b>	<b>9,208</b>	<b>9,416</b>	<b>9,006</b>	<b>9,119</b>	<b>10,052</b>	<b>10,109</b>	<b>10,294</b>	<b>10,144</b>	<b>10,107</b>	
<b>a. Stationary Combustion Sources</b>	<b>5,546</b>	<b>4,661</b>	<b>4,600</b>	<b>4,610</b>	<b>3,667</b>	<b>4,626</b>	<b>4,658</b>	<b>5,005</b>	<b>4,351</b>	<b>4,405</b>	<b>4,471</b>	<b>5,158</b>	<b>5,830</b>	<b>5,834</b>	<b>5,387</b>	<b>4,773</b>	<b>4,207</b>	<b>5,113</b>	<b>4,758</b>	<b>4,696</b>	<b>4,542</b>	<b>4,475</b>	<b>4,177</b>	<b>4,600</b>	<b>5,136</b>	<b>5,148</b>	<b>5,333</b>	<b>5,180</b>	<b>4,877</b>	
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	1,128	
Petroleum Refining Industries	1,033	1,020	861	1,035	465	949	1,091	1,129	891	1,021	1,028	988	1,147	1,094	1,127	949	976	1,037	786	1,068	997	812	1,021	956	919	1,046	1,195	981	934	
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	1,646	1,912	1,994	1,973	1,944	1,860	1,614	1,756	1,870	1,721	1,543	1,558	1,880	
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	96	
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	
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	316	
Residential	828	800	813	817	755	701	683	700	612	579	562	607	675	652	577	443	440	581	640	536	503	573	470	390	453	378	445	527	508	
Agriculture and Forestry	24	41	59	54	53	56	57	74	74	68	47	9	9	11	10	8	6	8	9	8	11	18	11	8	11	12	10	9	7	
<b>b. Transport <sup>3</sup></b>	<b>3,349</b>	<b>3,192</b>	<b>3,152</b>	<b>3,277</b>	<b>3,281</b>	<b>3,230</b>	<b>3,281</b>	<b>3,353</b>	<b>3,378</b>	<b>3,487</b>	<b>3,628</b>	<b>3,690</b>	<b>3,791</b>	<b>4,023</b>	<b>3,803</b>	<b>3,959</b>	<b>3,844</b>	<b>4,116</b>	<b>4,246</b>	<b>4,003</b>	<b>4,089</b>	<b>4,455</b>	<b>4,304</b>	<b>3,955</b>	<b>4,260</b>	<b>4,396</b>	<b>4,400</b>	<b>4,303</b>	<b>4,393</b>	
Domestic Aviation	191	167	173	165	173	181	186	193	192	201	208	188	168	188	198	199	206	211	205	178	190	188	229	234	219	208	204	197	205	
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	2,941	3,104	3,121	3,033	3,061	
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	
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	
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	
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	
Light-Duty Diesel Vehicles	4	3	3	3	3	2	3	3	3	3	3	4	4	5	4	5	6	6	6	5	5	6	8	6	6	7	8	8	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	
Heavy-Duty Diesel Vehicles	358	295	259	302	303	284	322	386	444	486	567	636	670	782	690	756	719	745	769	713	723	903	771	790	943	1,016	1,059	903	981	
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	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic Navigation	974	972	971	970	969	968	977	987	997	1,006	1,016	1,038	1,060	1,081	1,103	1,125	1,115	1,106	1,096	1,087	1,077	973	868	763	659	554	553	552	551	
Other Transportation	614	574	552	630	627	610	612	615	561	558	571	517	548	606	531	513	479	511	522	467	507	556	416	372	442	530	522	521	576	
Off-Road Agriculture & 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	
Off-Road Commercial & 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	
Off-Road Manufacturing, Mining & 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	307	335	341	393	393	
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	
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	
Pipeline Transport	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	x	x	x	x	x	-	-	x	-	-	-	-	-	-
<b>c. Fugitive Sources</b>	<b>41</b>	<b>22</b>	<b>14</b>	<b>24</b>	<b>9</b>	<b>20</b>	<b>39</b>	<b>146</b>	<b>2,088</b>	<b>966</b>	<b>308</b>	<b>315</b>	<b>1,548</b>	<b>1,005</b>	<b>862</b>	<b>908</b>	<b>1,263</b>	<b>1,039</b>	<b>806</b>	<b>614</b>	<b>577</b>	<b>486</b>	<b>525</b>	<b>564</b>	<b>656</b>	<b>564</b>	<b>661</b>	<b>837</b>		
Coal Mining	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and Natural Gas	41	22	14	24	9	20	39	146	2,088	966	308	315	1,548	1,005	862	908	1,263	1,039	806	614	577	486	525	564	656	564	661	837	837	
<b>d. CO<sub>2</sub> Transport and Storage</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>INDUSTRIAL PROCESSES AND PRODUCT USE</b>	<b>98</b>	<b>80</b>	<b>86</b>	<b>94</b>	<b>97</b>	<b>112</b>	<b>110</b>	<b>130</b>	<b>134</b>	<b>147</b>	<b>144</b>	<b>135</b>	<b>122</b>	<b>193</b>	<b>315</b>	<b>148</b>	<b>124</b>	<b>129</b>	<b>132</b>	<b>170</b>	<b>217</b>	<b>244</b>	<b>204</b>	<b>211</b>	<b>192</b>	<b>189</b>	<b>202</b>	<b>241</b>	<b>255</b>	
<b>a. Mineral Products</b>	<b>64</b>	<b>51</b>	<b>58</b>	<b>60</b>	<b>69</b>	<b>72</b>	<b>68</b>	<b>82</b>	<b>80</b>	<b>74</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	
Cement Production	60	47	54	56	65	70	66	79	79	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	
<b>b. Chemical Industry <sup>4</sup></b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Adipic Acid Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>c. Metal Production</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Iron and Steel Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SF <sub>6</sub> Used in Magnesium Smelters and Casters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>d. Production and Consumption of Halocarbons, SF<sub>6</sub> and NF<sub>3</sub> <sup>5</sup></b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7</b>	<b>13</b>	<b>17</b>	<b>25</b>	<b>33</b>	<b>43</b>	<b>48</b>	<b>55</b>	<b>59</b>	<b>66</b>	<b>71</b>	<b>75</b>														

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**(kt CO<sub>2</sub> equivalent)**

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<b>NIR TOTAL EMISSIONS <sup>2</sup></b>	<b>9,777</b>	<b>8,695</b>	<b>8,599</b>	<b>8,746</b>	<b>7,790</b>	<b>8,713</b>	<b>8,808</b>	<b>9,343</b>	<b>10,658</b>	<b>9,703</b>	<b>9,259</b>	<b>9,995</b>	<b>11,989</b>	<b>11,773</b>	<b>11,062</b>	<b>10,453</b>	<b>10,107</b>	<b>11,073</b>	<b>10,628</b>	<b>10,078</b>	<b>10,016</b>	<b>10,271</b>	<b>9,871</b>	<b>9,960</b>	<b>10,878</b>	<b>10,929</b>	<b>11,143</b>	<b>11,037</b>	<b>11,009</b>
<b>WASTE</b>	<b>689</b>	<b>687</b>	<b>691</b>	<b>688</b>	<b>682</b>	<b>669</b>	<b>667</b>	<b>657</b>	<b>647</b>	<b>644</b>	<b>641</b>	<b>639</b>	<b>640</b>	<b>638</b>	<b>627</b>	<b>600</b>	<b>597</b>	<b>604</b>	<b>611</b>	<b>518</b>	<b>499</b>	<b>501</b>	<b>523</b>	<b>529</b>	<b>537</b>	<b>543</b>	<b>556</b>	<b>562</b>	<b>560</b>
a. Solid Waste Disposal	467	463	458	452	446	440	434	427	423	422	423	425	427	428	431	436	444	454	473	406	412	419	443	454	466	472	485	490	489
b. Biological Treatment of Solid Waste	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
c. Wastewater Treatment and Discharge	23	23	23	23	23	23	23	22	22	22	22	21	21	21	21	21	21	21	23	25	23	23	22	22	22	24	26	26	
d. Incineration and Open Burning of Waste	142	141	148	149	148	141	144	141	135	134	133	130	131	129	115	85	76	74	61	34	12	8	7	4	1	1	1	1	
e. Industrial Wood Waste Landfills	58	60	62	63	65	65	66	67	67	65	64	63	61	60	58	57	56	55	54	53	52	51	50	49	48	47	46	44	
<b>EMISSION RATIOS</b>																													
Emissions per capita (t GHG/population)	16.9	15.0	14.8	15.1	13.6	15.4	15.7	17.0	19.7	18.2	17.5	19.1	23.1	22.7	21.4	20.3	19.8	21.8	20.8	19.5	19.2	19.6	18.8	18.9	20.6	20.7	21.0	20.9	20.9
Emissions intensity (t GHG/\$m real 2007 GDP) <sup>6</sup>	507	449	453	454	389	422	448	469	510	438	397	418	432	398	377	346	322	317	309	326	307	306	308	295	326	332	333	329	340
Emissions relative to 1990 (% change) <sup>7</sup>	-	-11.1	-12.1	-10.6	-20.3	-10.9	-9.9	-4.4	9.0	-0.8	-5.3	2.2	22.6	20.4	13.1	6.9	3.4	13.3	8.7	3.1	2.4	5.1	1.0	1.9	11.3	11.8	14.0	12.9	12.6
Emissions relative to 2005 (% change) <sup>8</sup>	-6.5	-16.8	-17.7	-16.3	-25.5	-16.7	-15.7	-10.6	2.0	-7.2	-11.4	-4.4	14.7	12.6	5.8	0.0	-3.3	5.9	1.7	-3.6	-4.2	-1.7	-5.6	-4.7	4.1	4.6	6.6	5.6	5.3
NL emissions as share of Canadian total (%)	1.6	1.5	1.4	1.4	1.2	1.3	1.3	1.4	1.5	1.4	1.3	1.4	1.7	1.6	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.5	1.6	1.5	1.5
<b>LAND USE, LAND-USE CHANGE AND FORESTRY <sup>9</sup></b>	<b>4,513</b>	<b>3,556</b>	<b>2,837</b>	<b>3,090</b>	<b>2,332</b>	<b>1,947</b>	<b>1,550</b>	<b>1,162</b>	<b>1,359</b>	<b>1,089</b>	<b>1,146</b>	<b>794</b>	<b>696</b>	<b>1,164</b>	<b>878</b>	<b>710</b>	<b>365</b>	<b>59</b>	<b>703</b>	<b>580</b>	<b>262</b>	<b>-153</b>	<b>-453</b>	<b>91</b>	<b>274</b>	<b>252</b>	<b>300</b>	<b>-20</b>	<b>522</b>
Forest land	2,618	1,642	864	946	301	-95	-502	-887	-579	-901	-982	-1,142	-1,276	-714	-1,032	-1,131	-1,350	-1,570	-1,029	-1,149	-1,349	-1,636	-1,864	-1,386	-1,459	-1,469	-1,507	-1,603	-1,014
Cropland	18	18	19	20	20	21	21	22	22	22	23	23	24	25	27	27	29	29	28	29	28	29	29	30	30	31	31	31	32
Wetlands	32	31	31	27	27	3	3	16	49	31	29	25	25	22	20	18	18	6	6	6	6	6	5	4	6	6	6	6	
Settlements	88	77	76	73	72	71	73	72	69	67	70	68	74	71	70	68	67	66	71	72	68	66	79	168	324	380	350	215	200
Harvested Wood Products	1,757	1,788	1,847	2,024	1,912	1,947	1,955	1,938	1,797	1,870	2,006	1,819	1,849	1,759	1,791	1,726	1,601	1,516	1,627	1,622	1,508	1,382	1,297	1,275	1,374	1,303	1,420	1,331	1,298
<b>TOTAL EMISSIONS INCLUDING LAND USE, LAND USE CHANGE AND FORESTRY</b>	<b>14,291</b>	<b>12,251</b>	<b>11,436</b>	<b>11,835</b>	<b>10,122</b>	<b>10,659</b>	<b>10,358</b>	<b>10,505</b>	<b>12,017</b>	<b>10,792</b>	<b>10,405</b>	<b>10,788</b>	<b>12,685</b>	<b>12,937</b>	<b>11,939</b>	<b>11,163</b>	<b>10,472</b>	<b>11,132</b>	<b>11,330</b>	<b>10,658</b>	<b>10,278</b>	<b>10,118</b>	<b>9,418</b>	<b>10,051</b>	<b>11,152</b>	<b>11,181</b>	<b>11,443</b>	<b>11,017</b>	<b>11,531</b>

Source: Environment Canada

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

Footnotes:

- Data may be subject to further revisions in subsequent years
- NIR total emissions exclude all GHGs from the Land Use, Land-use Change and Forestry sector.
- Emissions from ethanol and biodiesel are included in the Transport categories using gasoline and diesel respectively.
- 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 CO<sub>2</sub> eq values within provincial/territorial tables.
- Emission estimates from consumption of PFCs and NF<sub>3</sub>, as well as emissions of SF<sub>6</sub> 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 CF<sub>4</sub> emissions from the use of NF<sub>3</sub>.
- Based on chained 2012 dollars.
- 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.
- The province has established a provincial target for 2030 equal to 30% below 2005 levels, which is the same as the federal target.
- 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