

Historical GHG Emissions Summary
Newfoundland and Labrador, 1990-2016¹
 (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	
NIR TOTAL EMISSIONS ²	9,319	8,206	8,079	8,155	7,142	8,173	8,318	8,858	10,209	9,267	8,823	9,476	11,418	11,078	10,551	9,887	9,567	10,691	10,046	9,818	9,832	9,965	9,412	9,383	10,376	10,569	10,751	
ENERGY	8,599	7,500	7,349	7,429	6,408	7,417	7,564	8,080	9,414	8,468	8,010	8,679	10,629	10,193	9,555	9,047	8,731	9,850	9,186	8,940	8,939	9,019	8,473	8,458	9,473	9,660	9,815	
a. Stationary Combustion Sources	5,550	4,665	4,603	4,613	3,669	4,628	4,660	5,114	4,365	4,411	4,474	5,160	5,832	5,835	5,388	4,775	4,209	5,114	4,759	4,698	4,544	4,493	4,194	4,603	5,134	5,033	5,052	
Public Electricity and Heat Production	1,645	1,304	1,507	1,368	729	1,277	1,187	1,243	1,051	829	823	1,713	1,899	1,590	1,290	819	640	1,040	876	777	691	790	769	867	1,206	1,340	1,523	
Petroleum Refining Industries	1,033	1,020	861	1,034	465	949	1,091	1,129	891	1,022	1,029	988	1,147	1,094	1,127	951	978	1,038	788	1,068	997	828	1,035	956	914	912	1,021	
Mining and Upstream Oil and Gas Production	1,160	771	720	656	1,006	990	1,030	1,290	1,189	1,332	1,447	1,207	1,391	1,725	1,655	1,896	1,646	1,912	1,994	1,973	1,944	1,860	1,617	1,759	1,872	1,726	1,424	
Manufacturing Industries	506	393	316	336	305	319	288	302	233	256	245	261	292	299	310	276	193	181	140	122	128	146	79	72	40	49	52	
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	
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	
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	
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	
b. Transport ³	3,008	2,813	2,732	2,792	2,730	2,770	2,865	2,922	2,960	3,090	3,228	3,203	3,248	3,311	3,275	3,363	3,232	3,690	3,621	3,628	3,818	4,040	3,754	3,288	3,682	4,048	4,110	
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	207	
Road Transportation	1,522	1,431	1,408	1,464	1,464	1,425	1,461	1,516	1,589	1,683	1,798	1,921	1,990	2,125	1,949	2,101	2,023	2,264	2,394	2,246	2,288	2,708	2,708	2,465	2,813	3,025	3,033	
Light-Duty Gasoline Vehicles	651	629	629	627	615	594	581	564	559	574	582	600	610	603	550	595	565	646	678	622	614	682	720	621	670	674	632	
Light-Duty Gasoline Trucks	422	417	425	433	446	452	461	466	481	513	536	560	583	607	583	636	626	746	807	770	803	944	1,049	944	1,075	1,139	1,148	
Heavy-Duty Gasoline Vehicles	82	83	88	95	93	89	92	94	98	101	103	113	114	118	113	101	99	113	127	127	135	162	206	192	205	220	229	
Motorcycles	3	2	2	2	2	2	2	1	2	2	2	3	3	3	3	2	3	3	4	5	5	6	7	6	8	9	9	
Light-Duty Diesel Vehicles	4	3	3	3	3	2	3	3	3	3	3	4	4	5	4	3	3	3	2	2	2	2	1	1	1	1	1	
Light-Duty Diesel Trucks	2	2	1	2	2	2	2	3	3	3	4	5	6	8	6	6	6	5	5	4	3	3	2	1	1	2	2	
Heavy-Duty Diesel Vehicles	358	295	260	302	303	284	322	386	444	486	567	636	670	783	691	757	721	747	771	716	726	907	723	700	853	980	1,012	
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	
Railways	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	30	-	1	-	-	-	-	-	-	
Domestic Navigation	630	591	548	482	415	505	559	554	578	607	614	550	516	368	x	x	x	x	441	710	803	556	389	222	206	266	330	
Other Transportation	665	624	603	681	677	659	658	658	602	599	608	545	574	630	x	x	x	x	552	494	535	589	427	367	444	549	539	
Off-Road Agriculture & Forestry	25	22	21	27	28	27	28	30	31	29	30	34	31	37	33	34	32	34	33	30	32	29	20	17	19	25	22	
Off-Road Commercial & Institutional	31	28	26	33	33	33	35	38	38	37	39	44	44	51	46	48	45	50	52	47	50	51	41	39	44	49	20	
Off-Road Manufacturing, Mining & Construction	223	208	194	246	251	247	258	275	238	240	268	256	289	337	282	282	261	269	272	242	279	348	211	179	220	297	322	
Off-Road Residential	7	7	6	8	8	9	10	12	13	15	16	19	22	24	23	25	24	27	x	x	x	x	x	x	27	30	29	
Off-Road Other Transportation	379	360	355	368	357	343	327	304	283	279	255	191	188	181	169	146	139	158	167	152	151	131	127	109	134	149	146	
Pipeline Transport	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	x	x	x	x	
c. Fugitive Sources	41	22	14	24	9	20	39	45	2,089	967	308	316	1,549	1,047	892	908	1,291	1,045	806	614	577	486	525	568	656	578	653	
Coal Mining	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and Natural Gas	41	22	14	24	9	20	39	45	2,089	967	308	316	1,549	1,047	892	908	1,291	1,045	806	614	577	486	525	568	656	578	653	
d. CO₂ Transport and Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INDUSTRIAL PROCESSES AND PRODUCT USE	98	80	86	93	97	113	111	133	139	152	150	141	130	202	323	168	153	152	147	198	229	262	216	234	210	220	248	
a. Mineral Products	64	51	58	60	69	72	68	82	80	74	2	2	1	1	2	2	3	1	2	1	1	1	1	1	1	1	1	
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	
b. Chemical Industry ⁴	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Adipic Acid Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c. Metal Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron and Steel Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum Production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SF ₆ Used in Magnesium Smelters and Casters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d. Production and Consumption of Halocarbons, SF₆ and NF₃ ⁵	-	-	-	-	-	8	15	20	29	39	50	56	63	68	75	81	84	99	103	115	128	141	148	149	164	179	196	
e. Non-Energy Products from Fuels and Solvent Use	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
f. Other Product Manufacture and Use	5	4	4	4	4	5	5	5	8	8	8	8	7	8	8	6	6	6	6	6	4	4	5	5	5	8	9	
AGRICULTURE	55	54	55																									

Historical GHG Emissions Summary
Newfoundland and Labrador, 1990-2016¹
(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	
NIR TOTAL EMISSIONS ²	9,319	8,206	8,079	8,155	7,142	8,173	8,318	8,858	10,209	9,267	8,823	9,476	11,418	11,078	10,551	9,887	9,567	10,691	10,046	9,818	9,832	9,965	9,412	9,383	10,376	10,569	10,751	
Indirect Sources	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3
d. Field Burning of Agricultural Residues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e. Liming, Urea Application and Other Carbon-containing Fertilizers	3	3	3	2	4	4	2	2	11	2	12	-	-	21	7	-	2	-	1	2	19	37	66	25	21	14	14	
WASTE	566	573	588	579	583	587	589	592	594	594	596	599	601	601	603	606	610	615	636	601	568	570	582	589	596	597	600	
a. Solid Waste Disposal	525	531	536	537	541	545	549	551	554	555	557	560	562	563	565	568	572	578	598	563	537	539	552	558	565	566	569	
b. Biological Treatment of Solid Waste	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c. Wastewater Treatment and Discharge	42	42	42	42	42	41	41	40	40	39	39	39	39	38	38	38	38	38	38	38	31	31	31	31	31	31	31	31
d. Incineration and Open Burning of Waste	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMISSION RATIOS																												
Emissions per capita (t GHG/population)	16.1	14.2	13.9	14.1	12.4	14.4	14.9	16.1	18.9	17.4	16.7	18.2	22.0	21.4	20.4	19.2	18.7	21.0	19.6	19.0	18.8	19.0	17.9	17.8	19.6	20.0	20.3	
Emissions intensity (t GHG/\$m real 2007 GDP) ⁶	581	509	511	509	429	476	508	535	587	503	455	477	494	450	432	393	366	368	351	381	362	357	353	334	373	387	386	
Emissions relative to 1990 (% change) ⁷	-	-11.9	-13.3	-12.5	-23.4	-12.3	-10.7	-4.9	9.6	-0.6	-5.3	1.7	22.5	18.9	13.2	6.1	2.7	14.7	7.8	5.4	5.5	6.9	1.0	0.7	11.4	13.4	15.4	
Emissions relative to 2005 (% change) ⁸	-5.7	-17.0	-18.3	-17.5	-27.8	-17.3	-15.9	-10.4	3.3	-6.3	-10.8	-4.2	15.5	12.0	6.7	0.0	-3.2	8.1	1.6	-0.7	-0.6	0.8	-4.8	-5.1	5.0	6.9	8.7	
NL emissions as share of Canadian total (%)	1.5	1.4	1.3	1.3	1.1	1.3	1.2	1.3	1.5	1.3	1.2	1.3	1.6	1.5	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.4	1.5	1.5	
LAND USE, LAND-USE CHANGE AND FORESTRY ⁹	4,096	3,160	2,457	2,729	2,039	1,680	1,296	920	1,127	900	986	617	501	963	645	502	161	-108	565	445	155	-253	-564	-103	-116	-97		
Forest land	2,179	1,225	464	566	-11	-381	-775	-1,149	-830	-1,109	-1,160	-1,337	-1,489	-933	-1,282	-1,356	-1,570	-1,753	-1,178	-1,288	-1,466	-1,741	-1,959	-1,440	-1,510	-1,465		
Cropland	18	18	19	20	21	21	21	22	22	22	23	23	25	25	27	27	29	28	28	29	28	29	29	29	29	29	28	
Wetlands	32	31	31	27	27	3	3	17	49	31	29	25	25	23	22	20	18	18	7	6	6	6	6	5	6	6	6	
Settlements	110	97	96	93	91	90	92	91	88	85	89	85	92	89	87	85	83	83	83	83	82	77	75	74	73	77		
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	1,625	1,615	1,504	1,376	1,285	1,230	1,287	1,257		
TOTAL EMISSIONS INCLUDING LAND USE, LAND USE CHANGE AND FORESTRY	13,415	11,366	10,536	10,885	9,181	9,852	9,614	9,778	11,336	10,167	9,810	10,093	11,919	12,040	11,195	10,388	9,728	10,583	10,611	10,263	9,986	9,712	8,848	9,279	10,260	10,471		

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 the Ammonia Production, Nitric Acid Production and Petrochemical Production categories are included in Non-Energy Products from Fuels and Solvent Use within the provincial/territorial tables as CO₂ eq values.
- 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.
- Based on chained 2007 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 current Canadian GHG reduction target calls for a 17% reduction by 2020 below the 2005 level. While no province or territory has endorsed this target for its jurisdiction, this calculation shows the equivalent calculation for Newfoundland and Labrador.
- 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