



Unitil
energy for **life**

**GREENHOUSE GAS EMISSIONS
INVENTORY COMPARISON
CALENDAR YEAR 2020**

Prepared August 2021

2019-2020 Emissions Summary

The following emissions summary compares data from the 2019 and 2020 greenhouse gas emissions inventories. Due to the magnitude of Unital's Scope 3 emissions from energy delivery to customers (electricity and natural gas), these emissions are represented in Figure 1 with a broken y-axis. All emissions figures are in metric tons of carbon dioxide equivalent (MTCO₂e).

2019-2020 Emissions by Scope

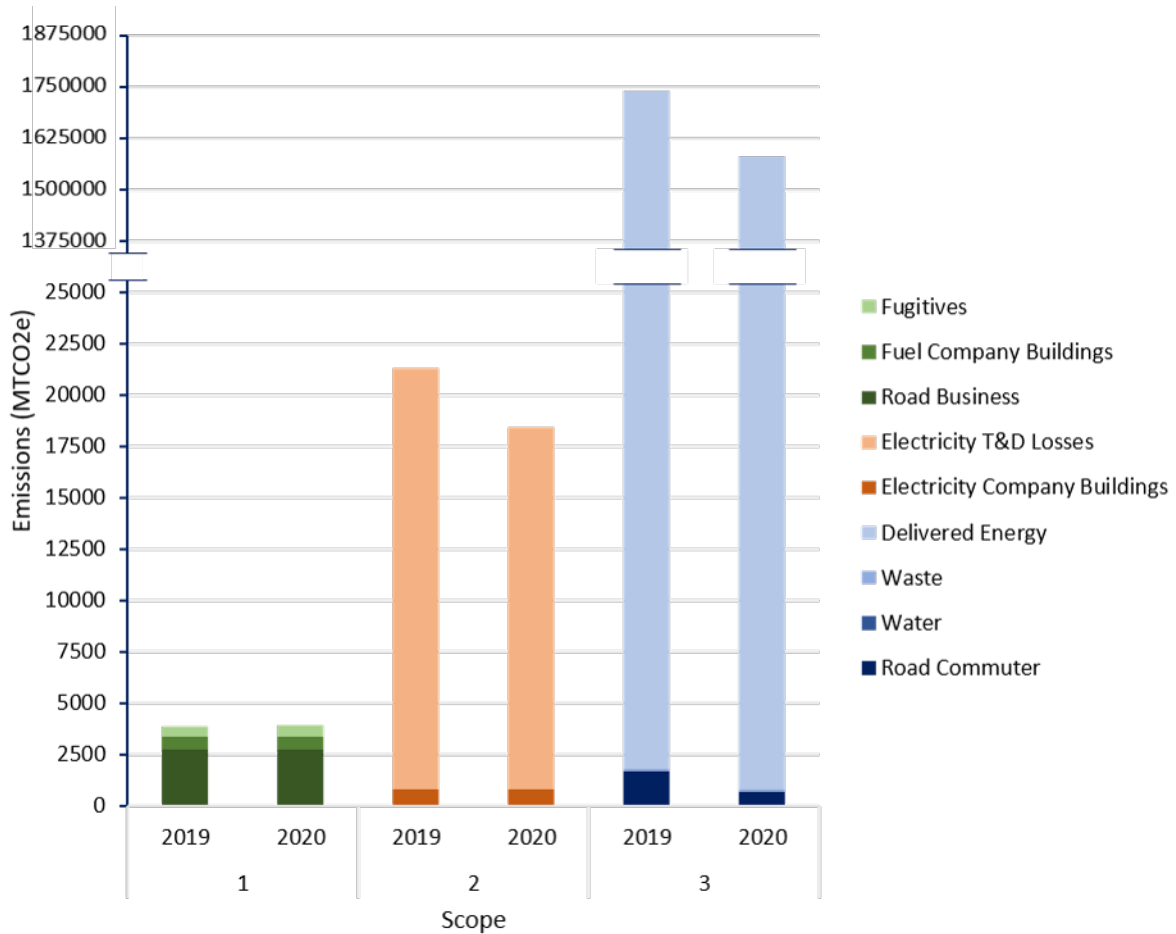


Figure 1: 2019-2020 Emissions by Scope and Category

2019-2020 Emissions Table

EMISSION NAME	SCOPE	2019 EMISSIONS MTCO2E	2020 EMISSIONS MTCO2E	PERCENTAGE CHANGE 2019-2020
FUEL COMPANY BUILDINGS	1	599	622	3.8%
FUGITIVES	1	528	512	-3.0%
ROAD BUSINESS	1	2,749	2,760	0.4%
ELECTRICITY COMPANY BUILDINGS	2	789	820	3.9%
ELECTRICITY T&D LOSSES	2	20,490	17,580	-14.2%
DELIVERED ELECTRICITY	3	384,300	384,300	0.0%
DELIVERED GAS	3	1,238,000	1,131,000	-8.6%
ROAD COMMUTER	3	1,683	691	-58.9%
WASTE	3	124	111	-10.5%
WATER	3	3	2	-29.1%
SCOPE 1 TOTAL	1	3,877	3,894	0.45%
SCOPE 2 TOTAL	2	21,279	18,400	-13.53%
SCOPE 3 TOTAL	3	1,624,110	1,516,104	-6.65%
Totals		1,649,266	1,538,399	-6.72%

Table 1: 2019-2020 Total Emissions and Percentage Changes from 2019

Scope 1 Emissions

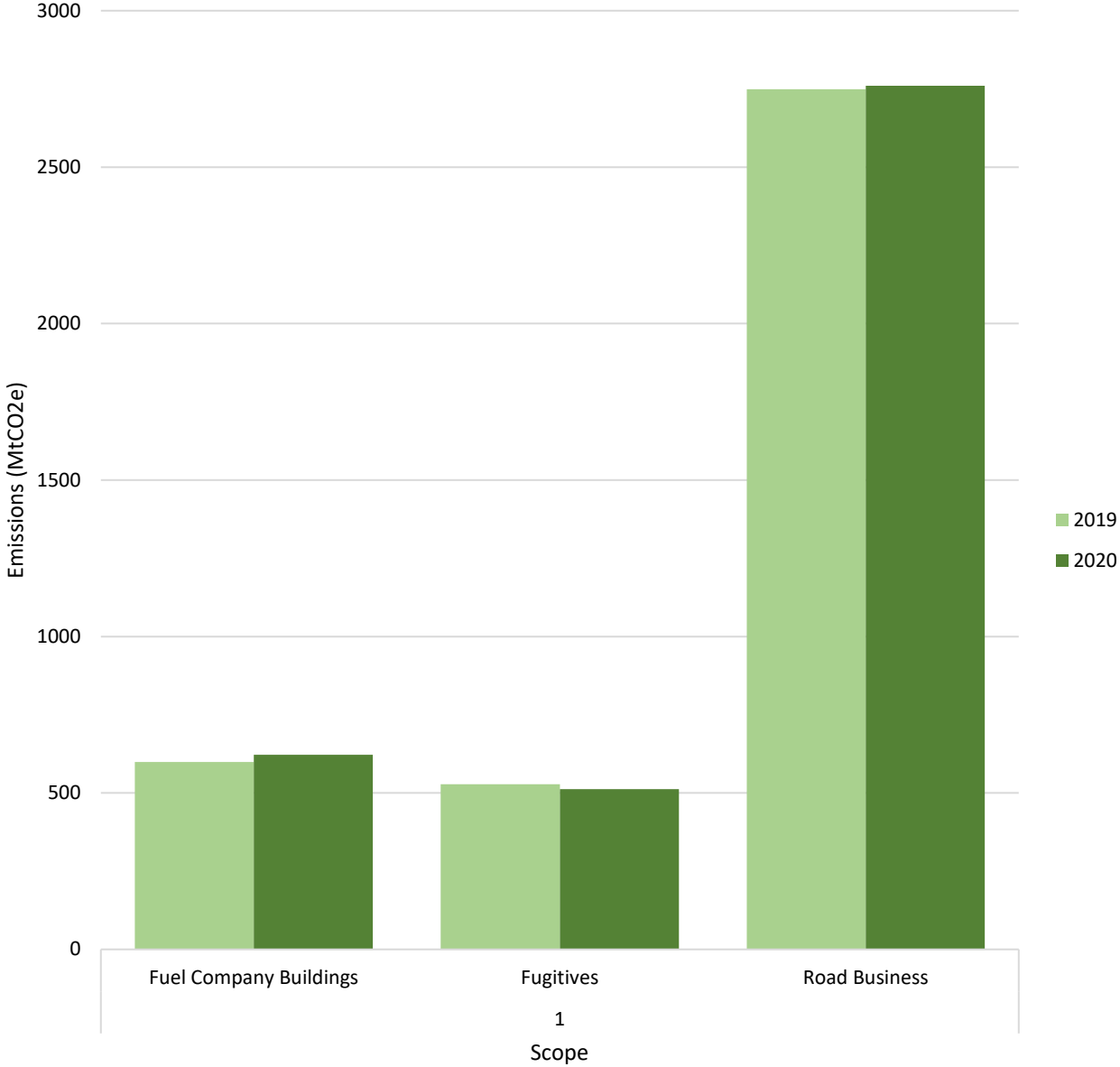


Figure 2: 2019-2020 Scope 1 Summary Chart

Fuel at Company Buildings

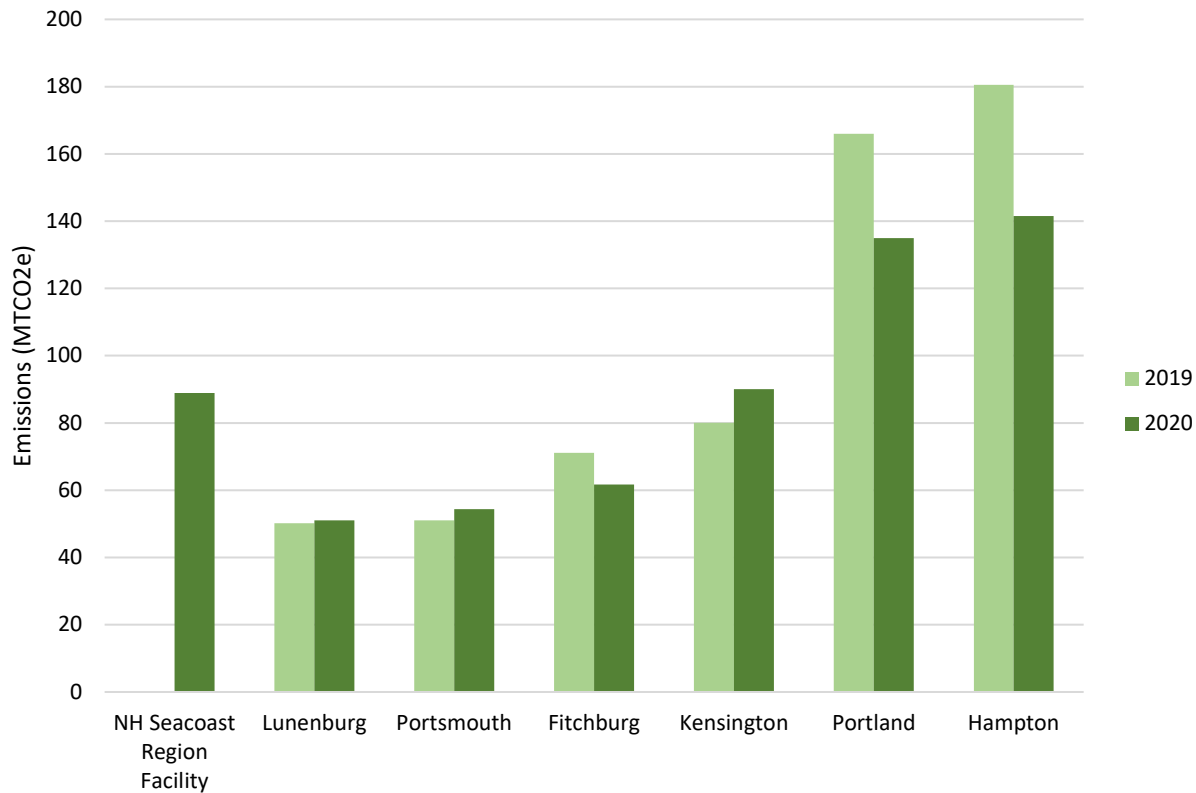


Figure 1: 2019-2020 Emissions from Fuel Use at Company Buildings

NODE	FUEL TYPE	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
LUNENBURG	Natural Gas	50.2	51	1.6%
FITCHBURG	Natural Gas	71.1	61.7	-13.2%
KENSINGTON	Diesel (Retail)	0	10.3	N/A
KENSINGTON	Oil (Gas)	80.1	79.7	-0.5%
NH SEACOAST REGION FACILITY	Natural Gas	0	88.9	N/A
PORTLAND	Natural Gas	166	135	-18.7%
PORTSMOUTH	Natural Gas	51	54.4	6.7%
HAMPTON	Natural Gas	179	141	-21.2%
HAMPTON	Natural Gas	1.55	0.494	-68.1%

Table 3: 2019-2020 Emissions from Fuel Use at Company Buildings

Fugitives



Figure 4: 2019-2020 Emissions from Fugitives

NODE	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
MAINE	219	204	-6.8%
MASSACHUSETTS	191	188	-1.6%
NEW HAMPSHIRE	114	116	1.8%
UNITIL CORPORATION	3.18	3.18	0.0%
TOTALS	527.18	511.18	-3.0%

Table 4: 2019-2020 Emissions from Fugitives

Road Business (Company-Owned Vehicles)

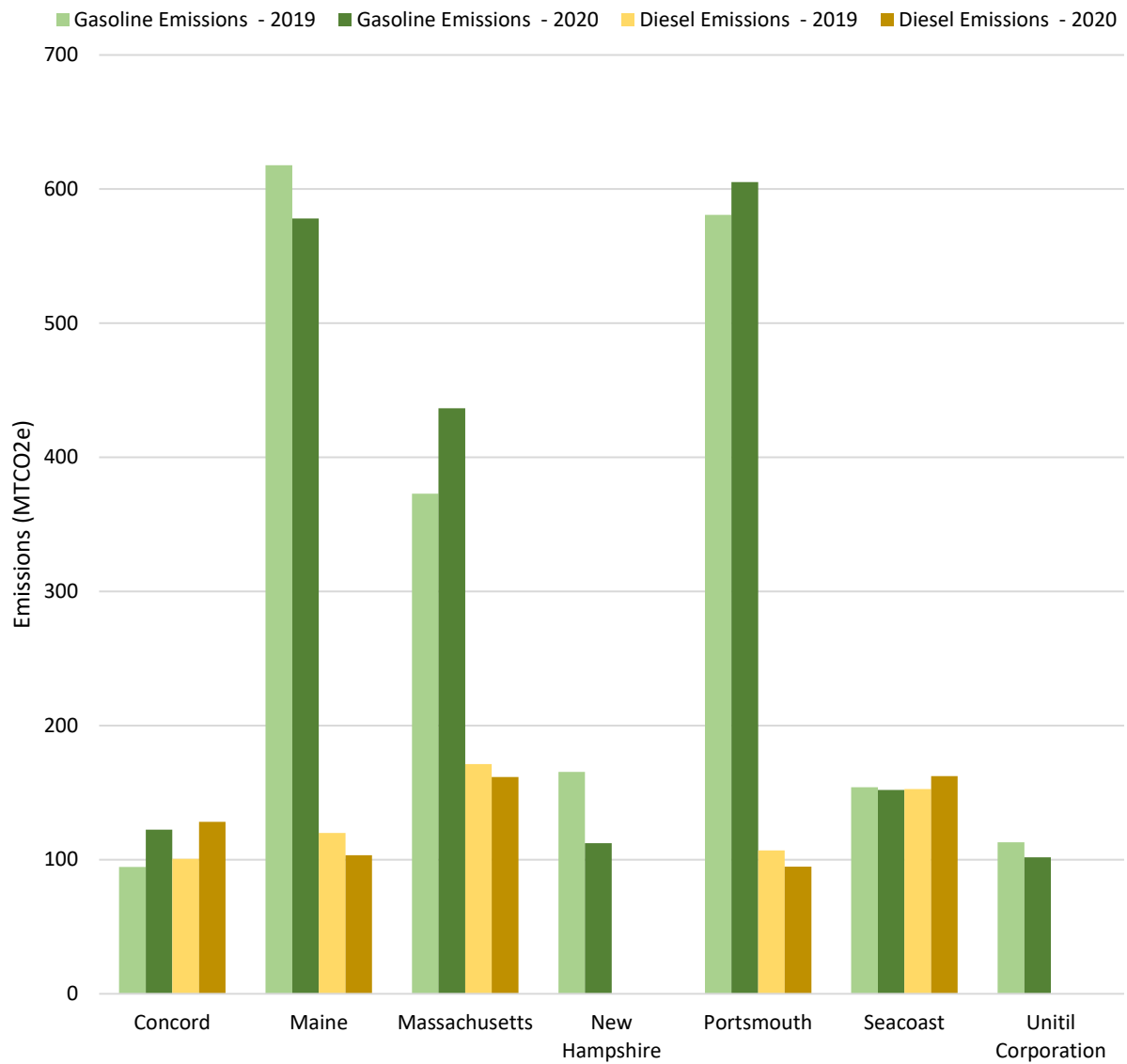


Figure 5: 2019-2020 Emissions from Road Business

NODE	GASOLINE EMISSIONS 2019	DIESEL EMISSIONS 2019	GASOLINE EMISSIONS 2020	DIESEL EMISSIONS 2020	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
CONCORD	94.5	100.6	122.3	128.3	195.1	250.6	28.5%
MAINE	617.8	119.9	578.2	103.3	737.7	681.5	-7.6%
MASSACHUSETTS	372.9	171.3	436.6	161.6	544.1	598.3	10.0%
NEW HAMPSHIRE	165.5	-	112.4	-	165.5	112.4	-32.1%

PORTSMOUTH	580.7	107.0	605.3	94.9	687.7	700.2	1.8%
SEACOAST	153.9	152.6	152.0	162.4	306.5	314.4	2.6%
UNITIL CORPORATION	112.9	-	101.8	-	112.9	101.8	-9.8%
				Totals	2,749.5	2,759.2	0.4%

**Note: In 2020, the Kensington facility had fleet emissions of .23 MTCO₂e from the consumption of LPG*

Table 5: 2019-2020 Emissions from Road Business

Scope 2 Emissions

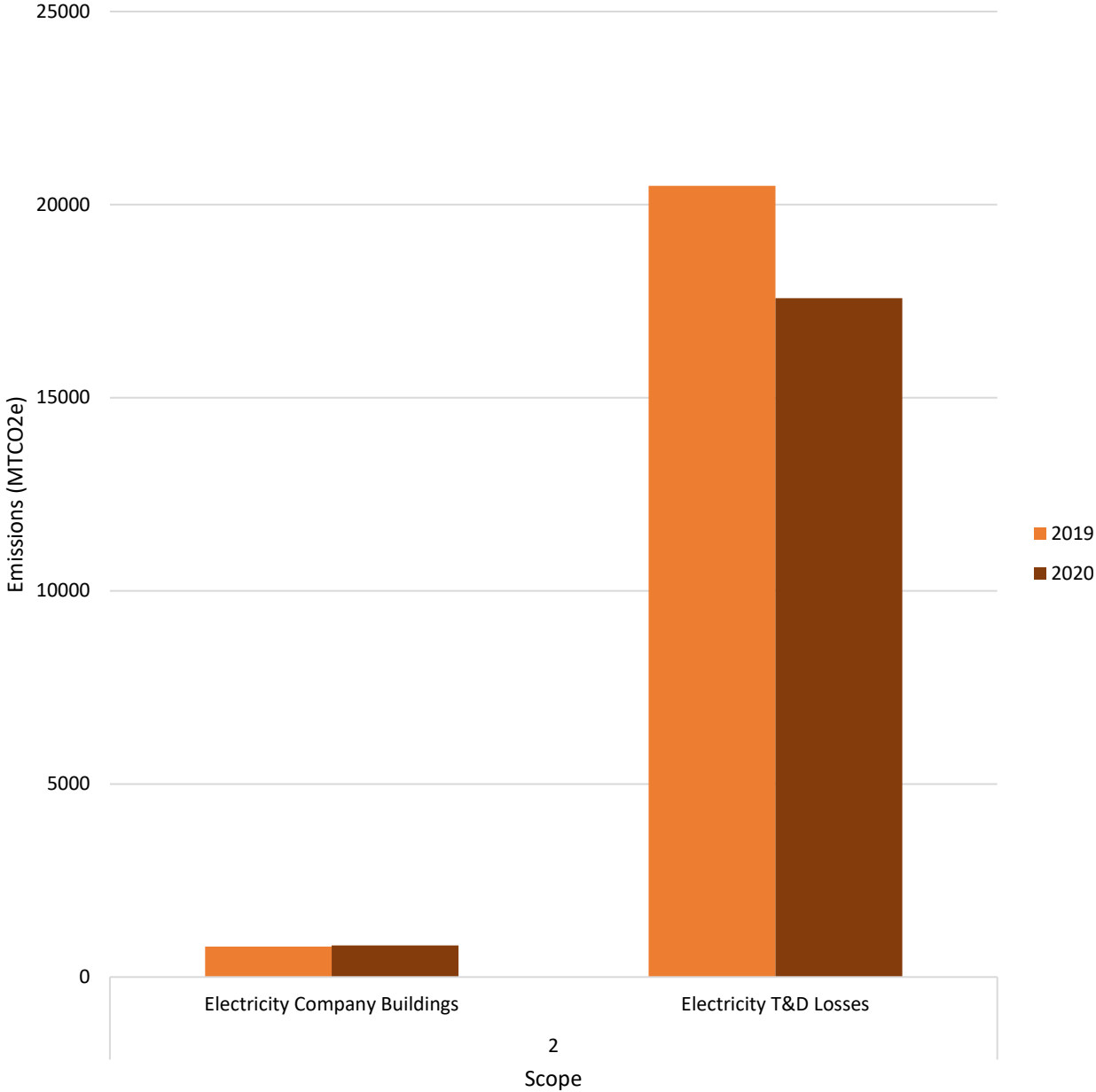


Figure 6: 2019-2020 Scope 2 Summary Chart

Electricity Use at Company Buildings

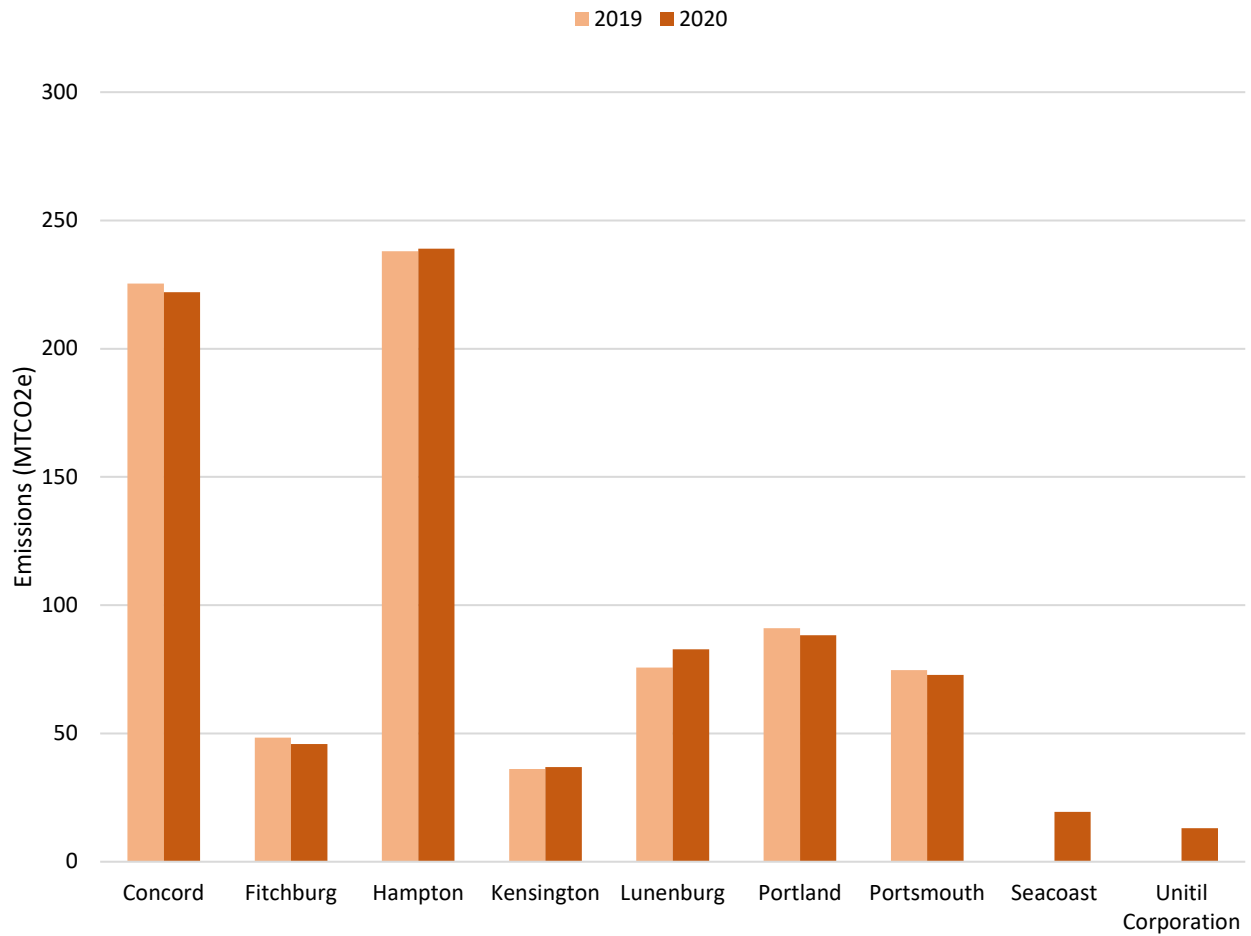


Figure 7: 2019-2020 Emissions from Electricity Use at Company Buildings

NODE	DATASOURCE (UNITIL METER # OR OTHER)	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
CONCORD	1041709000	53.8	46.2	-14.1%
CONCORD	1041710000	0.7	0.6	-20.4%
CONCORD	1041711000	85.6	86.6	1.2%
CONCORD	1041712000	19.1	17.3	-9.4%
CONCORD	1041713000	23.4	23.1	-1.3%
CONCORD	1041714000	42.7	48.2	12.9%
FITCHBURG	3102173000	1.1	1.0	-9.6%
FITCHBURG	3102174000	47.3	44.9	-5.1%
HAMPTON	2131555000	238.0	239.0	0.4%
KENSINGTON	2150197000	0.7	1.2	61.8%
KENSINGTON	2150198000	0.5	0.5	0.4%
KENSINGTON	2150200000	34.9	35.3	1.1%

LUNENBURG	3082349000	75.7	82.8	9.4%
PORTLAND	Electricity (Central Maine Power)	91.0	88.3	-3.0%
PORTSMOUTH	Electricity (Eversource)	74.7	72.8	-2.5%
SEACOAST	2115305001	0.0	19.4	N/A
UNITIL CORPORATION	Other Buildings - Electricity	0.0	13.1	N/A
	Totals	789.2	820.2	3.9%

Table 6: 2019-2020 Emissions from Electricity Use at Company Buildings

T&D Losses

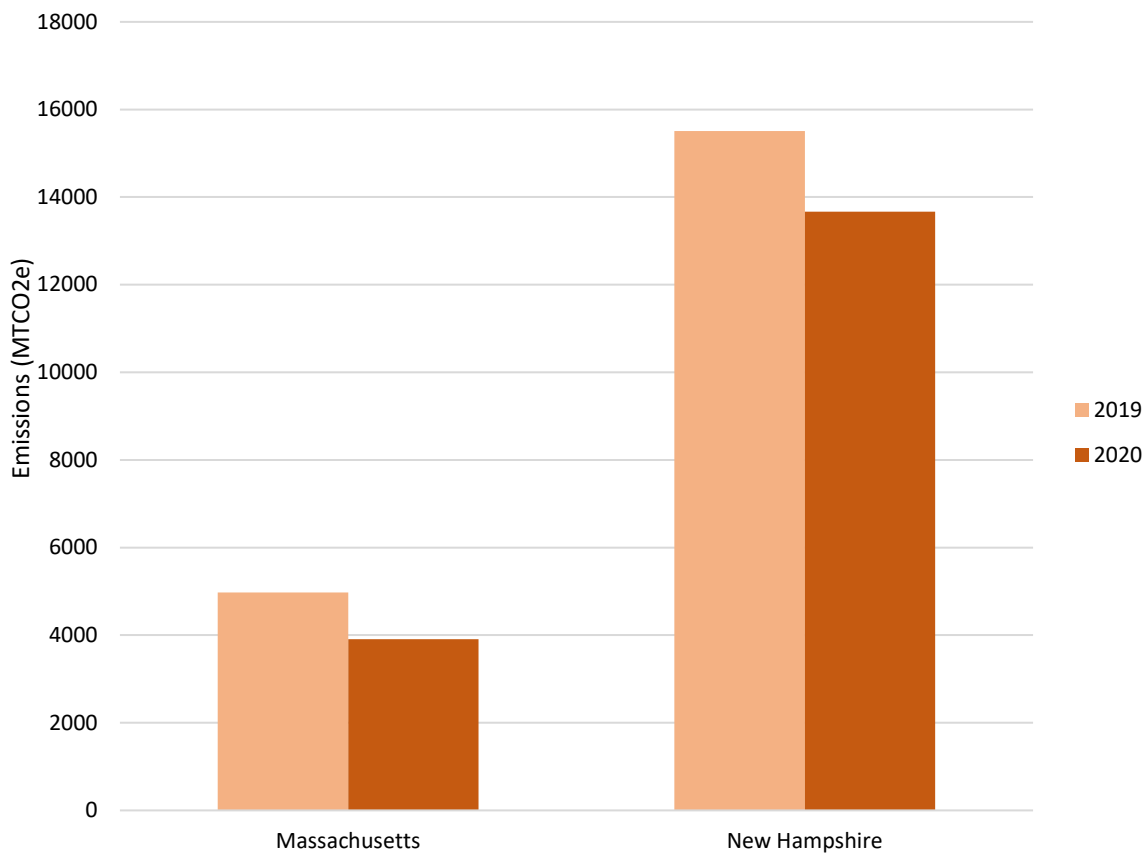


Figure 8: 2019-2020 Emissions from Transmission and Distribution Losses

NODE	ACTIVITY NAME	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
MASSACHUSETTS	Electricity (Grid)	4,970	3,910	-21.3%
NEW HAMPSHIRE	Electricity (Grid)	15,510	13,670	-11.9%
	Totals	20480	17580	-14.2%

Table 7: 2019-2020 Emissions from Transmission and Distribution Losses

Scope 3 Emissions

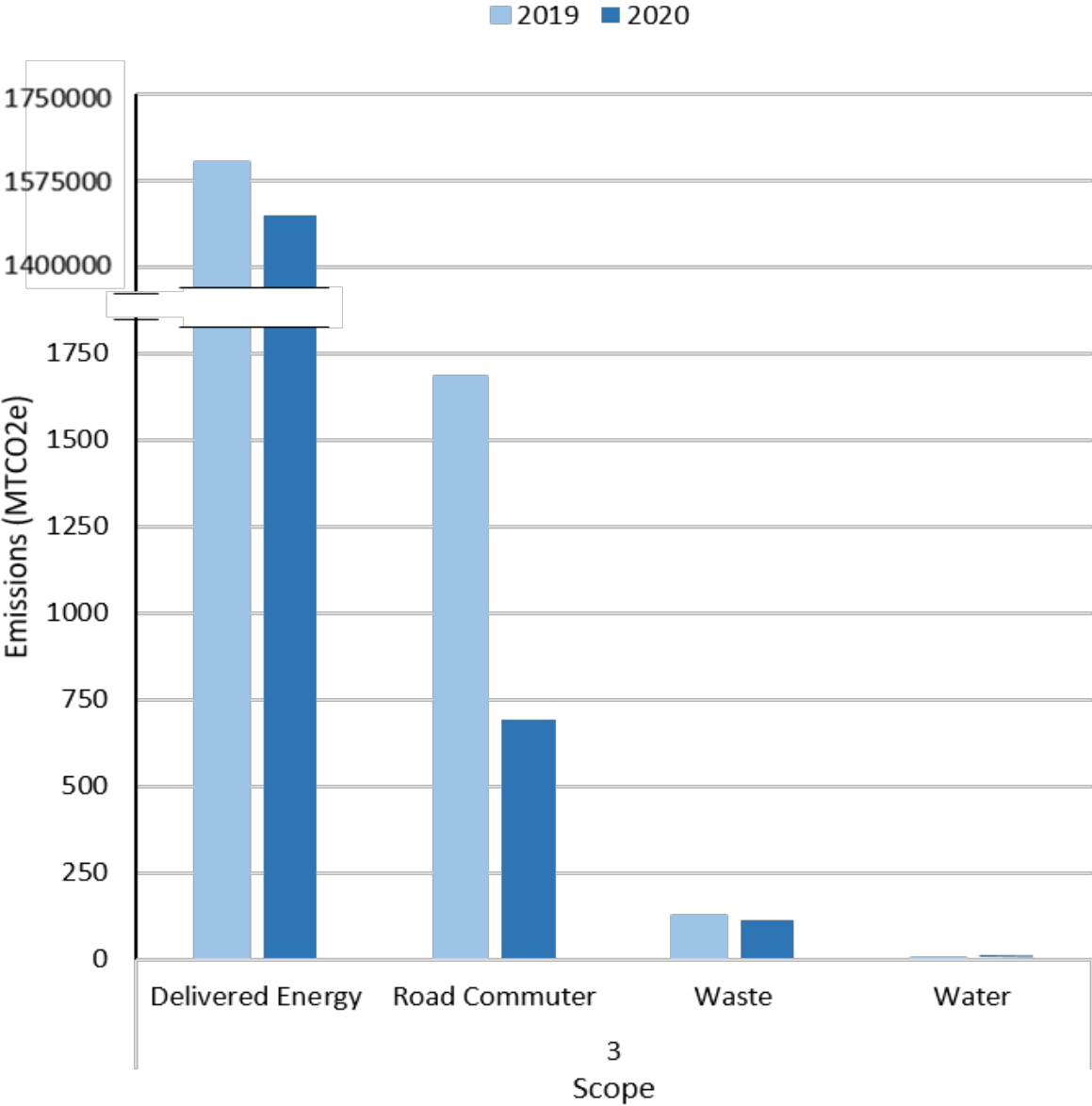


Figure 9: 2019-2020 Scope 3 Summary Chart

Waste

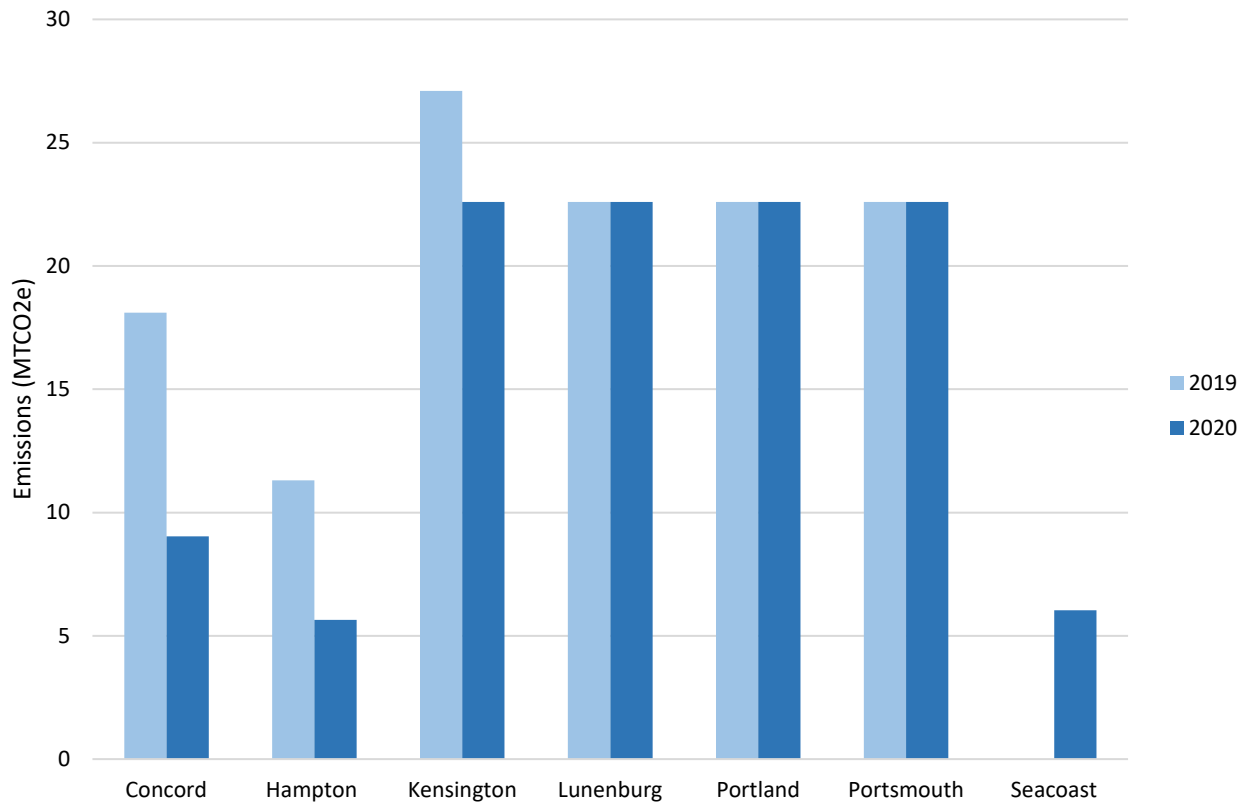


Figure 10: 2019-2020 Emissions from Waste

NODE	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
CONCORD	18.1	9.04	-50%
HAMPTON	11.3	5.65	-50%
KENSINGTON	27.1	22.6	-17%
LUNENBURG	22.6	22.6	0%
PORTLAND	22.6	22.6	0%
PORTSMOUTH	22.6	22.6	0%
SEACOAST	0	6.03	N/A
TOTALS	124.3	111.12	-11%

Table 8: 2019-2020 Emissions from Waste

Water

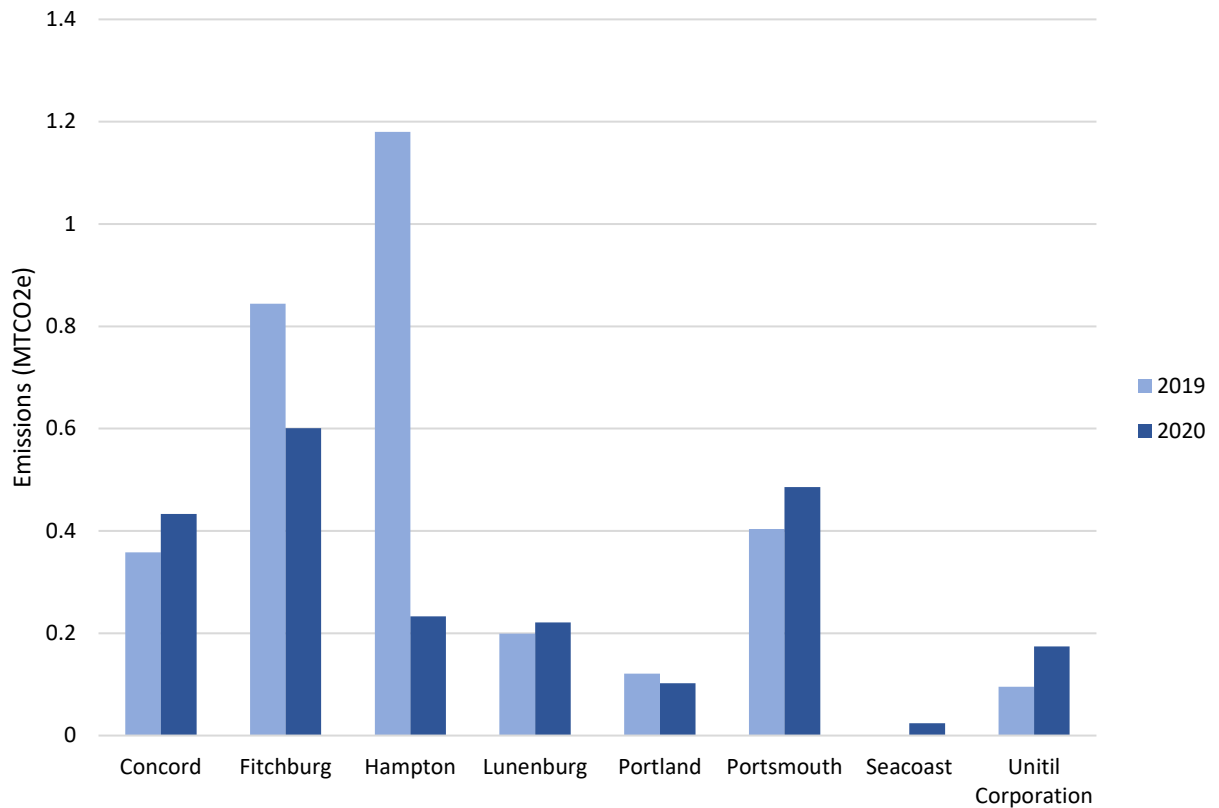


Figure 11: 2019-2020 Emissions from Water

NODE	ACTIVITY NAME	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
CONCORD	Water	0.358	0.433	20.9%
FITCHBURG	Water	0.844	0.601	-28.8%
HAMPTON	Water	1.18	0.233	-80.3%
LUNENBURG	Water	0.199	0.221	11.1%
PORTLAND	Water	0.121	0.102	-15.7%
PORTSMOUTH	Water	0.404	0.486	20.3%
SEACOAST	Water	0	0.0242	N/A
UNITIL CORPORATION	Water	0.0956	0.174	82.0%
	Totals	3.2016	2.2742	-29.0%

Table 9: 2019-2020 Emissions from Water

Delivered Energy

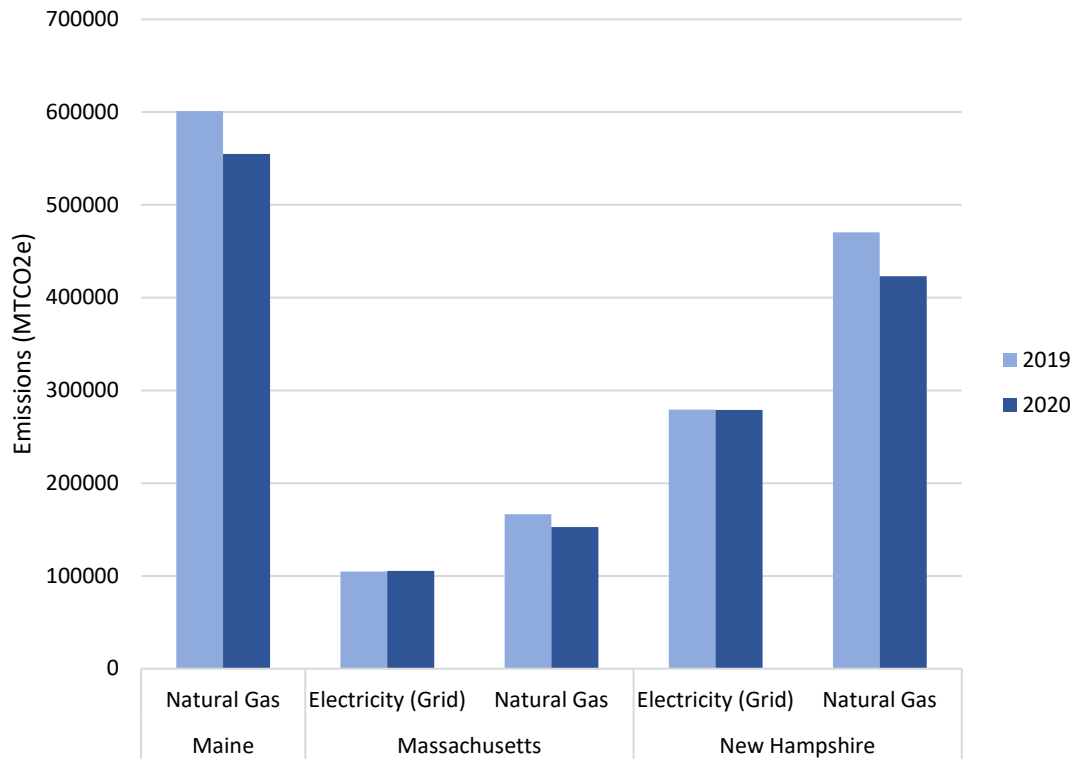


Figure 12: 2019-2020 Emissions from Delivered Energy

NODE	DATASOURCE	ACTIVITY NAME	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
MAINE	NU-ME-Delivered Gas (Customers)	Natural Gas	601,000	554,900	-7.7%
MASSACHUSETTS	FGE - Delivered Electricity (Customers)	Electricity (Grid)	104,900	105,400	0.5%
MASSACHUSETTS	FGE - Delivered Gas (Customers)	Natural Gas	166,400	152,600	-8.3%
NEW HAMPSHIRE	NU-NH - Delivered Gas (Customers)	Natural Gas	470,600	423,200	-10.1%
NEW HAMPSHIRE	UES - Delivered Electricity (Customers)	Electricity (Grid)	279,400	278,900	-0.2%
		Totals	1,622,300	1,515,000	-6.6%

Table 10: 2019-2020 Emissions from Delivered Energy

Commuting

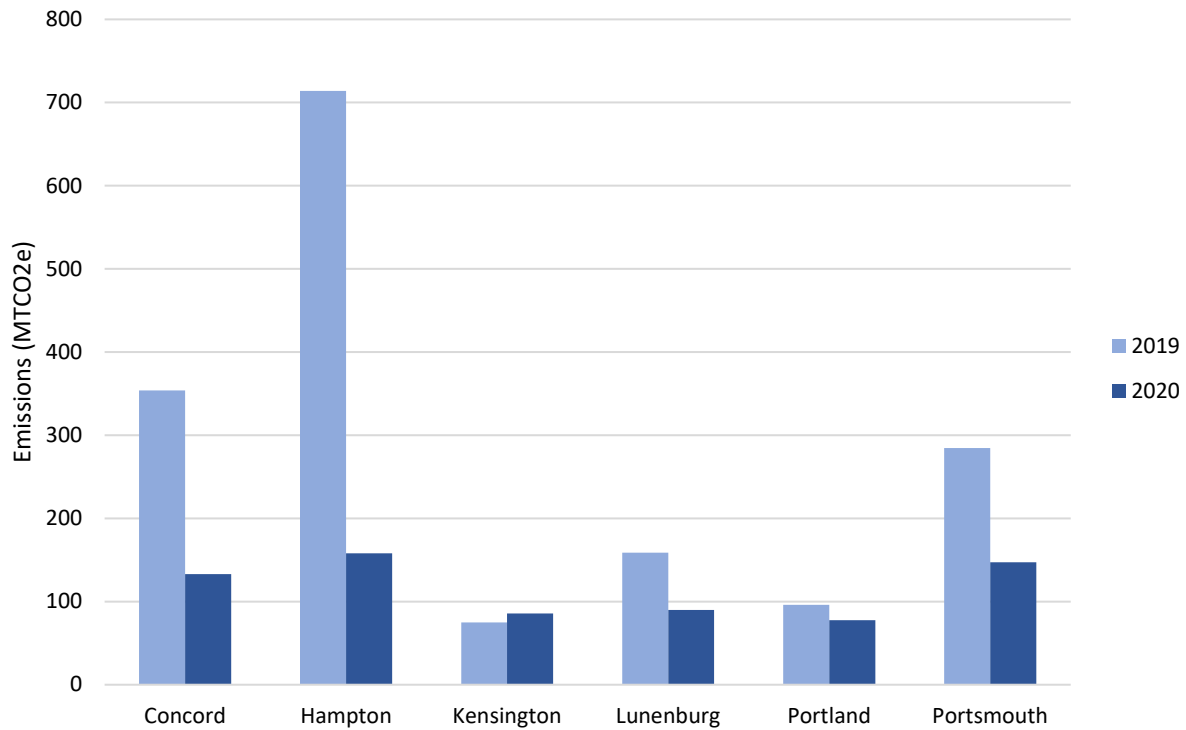


Figure 13: 2019-2020 Emissions from Commuting

NODE	COMMUTING TYPE	TOTAL 2019 EMISSIONS	TOTAL 2020 EMISSIONS	PERCENTAGE CHANGE 2019-2020
CONCORD	Car	352.0	133.0	-62%
CONCORD	Motorcycle		0.0	N/A
CONCORD	Carpool (2ppl)	1.9		N/A
HAMPTON	Car	710.0	158.0	-78%
HAMPTON	Motorcycle		0.0	N/A
HAMPTON	Carpool (2ppl)	3.9		N/A
KENSINGTON	Car	74.5	85.7	15%
KENSINGTON	Motorcycle		0.0	N/A
KENSINGTON	Carpool (2ppl)	0.4		N/A
LUNENBURG	Car	158.0	89.8	-43%
LUNENBURG	Motorcycle		0.0	N/A
LUNENBURG	Carpool (2ppl)	0.9		N/A
PORTLAND	Car	95.7	77.5	-19%
PORTLAND	Motorcycle		0.0	N/A
PORTLAND	Carpool (2ppl)	0.5		N/A
PORTSMOUTH	Car	283.0	147.0	-48%
PORTSMOUTH	Motorcycle		0.0	N/A

PORTSMOUTH	Carpool (2ppl)	1.6		N/A
	Totals	1682.4	691.1	-59%

Table 11: 2019-2020 Emissions from Commuting