2020 Entergy Corporate GHG Emissions breakdown by category

All numbers represent CO2 equivalents (CO2e)

Unhide columns I - U for additional calculations and conversions -->

Operational Emissions Category	Emissions Source Category	Corporate emissions source	Greenhouse gas	Total emissions short tons CO2e	Total emissions in metric tons CO2e	percentage of total corporate emissions	Calculation worksheet in inventory document
			CO2	35,630,423	32,323,376	87.4%	Stationary Combustion CEM
		Power generating units (includes emergency and backup generators)	CH4	15,624	14,174	0.0%	Stationary Combustion CEM
	Stationary Combustion		N2O	45,213	41,017	0.1%	Stationary Combustion CEM
		Small stationary combustion sources (co-located at generation stations and stand alone units)	CO2, CH4, N2O	346,343	314,197	0.9%	All small stat cbn totals
		Biomass power generation	CO2	0	0	0.0%	NA
			CO2	46,575	42,252	0.1%	Mobile Combustion
Direct Emission Sources	Mobile Combustion	Corporate fleet	CH4	68	62	0.0%	Mobile Combustion
	Mobile Combustion		N2O	363	329	0.0%	Mobile Combustion
		Biomass fleet	CO2	0	0	0.0%	NA
		Natural gas transmission and distribution	CH4	61,034	55,370	0.1%	Fugitive CH4-NG T&D
	Fugitive Emissions	Electricity transmission and distribution	SF6	168,427	152,795	0.4%	Fugitive SF6
		Cooling/air-conditioning (building, mobile and nuclear cooling eqpt)	HFCs	5,985	5,429	0.0%	Fugitive HFCs
	Process emissions	none applicable	NA	0	0	0.0%	NA
	Total Emissions fro	om Direct Sources		36,320,055	32,948,999	89.1%	
Indirect Emission Sources	Purchased Electricity	Power purchased for business operations outside Entergy service territory	CO2	21,427	19,438	0.1%	Purchased power
	T&D losses	Entergy purchased power consumed on Entergy T&D system	CO2, CH4, N2O	105,679	95,871	Note: these emissions are included within the Optional emissions	Purchased power
	Total Emissions from	m Indirect Sources		127,106	115,308		
	Purchased power (controllable)	Controllable purchased power sold to customers	CO2, CH4, N2O	3,388,931	3,074,386	8.3%	Purchased power
Optional Emissions	Purchased power (uncontrollable)	Uncontrollable purchased power sold to customers	CO2, CH4, N2O	Not Applicable	beginning in 2014 - See	*** Note at the bottom	of the Purchased power tab
Sources	Product combustion	Combustion of natural gas distributed to customers (Scope 3 for Entergy, Scope 1 for customers)	CO2, CH4, N2O	963,529	874,099	2.4%	Natural Gas Combustion
	Employee Commuting	Estimation of emissions resulting from employee commutes	CO2, CH4, N2O	51,557	46,772	0.1%	Employee Commuting
	Total Emissions fron	n Optional Sources		4,404,016	3,995,256	10.8%	
	GHG Stabilization (progress toward third			39,365,696	35,711,959	96.6%	
	Total Corporat	te emissions		40,745,497	36,963,693	100.0%	

Direct Emissions from fossil fuel usage at generating facilities using CEM data

2020					CO2 fro	m CEM	CH4	N2O		
Generating facility and EPA Acid Rain Unit ID	EPA Acid Rain Unit ID (Entergy ID if different)	Max capacity (MW)	State	Entergy equity share Primary of unit fuel(s)	Total unit CO2	Entergy equity share of unit CO2 emissions	Entergy share CH4 emissions from generation (2)	Entergy share N2O emissions from generation (3)	Total Facility CO2e in short tons	Total CO2e in metric tons
					short tons CO2	short tons CO2	short tons CO2e	short tons CO2e		
Acadia (Unit 2)	CT3	580	LA	100% Natural Gas	537,447.50	537,447.50	252.60	300.97		
Acadia (Unit 2)	CT4		LA	100% Natural Gas	537,447.50	537,447.50	252.60	300.97		
Totals						1,074,895.00	505.20	601.94	1,076,002.14	976,132.7
Attala	A01	480	MS	100% Natural Gas	414,340.00	414,340.00	194.74	232.03		
Attala	A02		MS	100% Natural Gas	414,340.00	414,340.00	194.74	232.03		
Totals		480				828,680.00	389.48	464.06	829,533.54	752,540.1
Baxter Wilson	1	550	MS	100% Gas/Oil	923,362.00	923,362.00	433.98	517.08		
Baxter Wilson	2	771	MS	100% Gas/Oil	0.00	0.00	0.00	0.00		
Totals		1321				923,362.00	433.98	517.08	924,313.06	838,522.7
Big Cajun 2 ⁽⁵⁾	2B3 (3)	257	LA	42% ⁽⁵⁾ Coal	291,313.10	122,351.50	33.03	619.10		
Totals		257				122,351.50	33.03	619.10	123,003.64	111,587.0
Calcasieu Plant	GTG1	322	LA	100% Natural gas	44,907.00	44,907.00	21.11	25.15		
Calcasieu Plant	GTG2		LA	100% Natural gas	13,175.00	13,175.00	6.19	7.38		
Totals		322				58,082.00	27.30	32.53	58,141.82	52,745.3
Choctaw County	CTG1		MS	100% Natural gas	739,785.67	739,785.67	347.70	414.28		
Choctaw County	CTG2		MS	100% Natural gas	739,785.67	739,785.67	347.70	414.28		
Choctaw County	CTG3		MS	100% Natural gas	739,785.67	739,785.67	347.70	414.28		
Totals						2,219,357.00	1,043.10	1,242.84	2,221,642.94	2,015,440.5
Gerald Andrus	1	761	MS	100% Gas/Oil	684,679.00	684,679.00	321.80	383.42		
Totals		761				684,679.00	321.80	383.42	685,384.22	621,770.10
Hinds Energy Facility	H01	456	MS	100% Gas CT	621,202.50	621,202.50	291.97	347.87		
Hinds Energy Facility	H02	.00	MS	100% Gas CT	621,202.50	621,202.50	291.97	347.87		
Hinds Energy Facility	Unit 2	29	MS	100% Gas CT	4,254.00	4,254.00	2.00	2.38		
Totals		485				1,246,659.00	585.93	698.13	1,247,943.06	1,132,114.9
Hot Spring Energy Facility	CT-1	620	AR	100% Gas CT	257,304.50	257,304.50	120.93	144.09		
Hot Spring Energy Facility	CT-2	020	AR	100% Gas CT	257,304.50	257,304.50	120.93	144.09		
Totals		620				514,609.00	241.87	288.18	515,139.05	467,326.2
Independence	1	472	AR	56.5% Coal	1,938,056.00	1,095,001.64	295.65	5,540.71		
Independence	2	332	AR	39.37% Coal	1,750,610.00	689,215.16	186.09	3,487.43		
Totals		804			•	1,784,216.80	481.74	9,028.14	1,793,726.67	1,627,241.4
Lake Catherine	4	547	AR	100% Gas/Oil	311,859.00	311,859.00	146.57	174.64		
Γotals		547			•	311,859.00	146.57	174.64	312,180.21	283,205.1
Lake Charles Power Station	1A	877	LA	100% Natural Gas	657,081.00	657,081.00	308.83	367.97		
Lake Charles Power Station	1B	077	LA	100% Natural Gas	657,081.00	657,081.00		367.97		
Totals		877				1,314,162.00	617.66	735.93	1,315,515.59	1,193,415.6
Lewis Creek	1	260	TX	100% Gas/Oil	732,400.00	732,400.00		410.14		
_ewis Creek	2	260	TX	100% Gas/Oil	636,102.00	636,102.00		356.22		
Fotals		520			•	1,368,502.00		766.36	1,369,911,56	1,242,762.8
Little Gypsy	1	244	LA	100% Gas/Oil	0.00	0.00		0.00	.,,	, =,, ==,0
					2.30	2.30				

Generating facility and EPA Acid Rain Unit ID	EPA Acid Rain Unit ID (Entergy ID if different)	Max capacity (MW)	State	Entergy equity share Primary of unit fuel(s)	Total unit CO2	Entergy equity share of unit CO2 emissions	Entergy share CH4 emissions from generation (2)	Entergy share N2O emissions from generation (3)	Total Facility CO2e in short tons	Total CO2e in metric tons
Little Gypsy	3	573	LA	100% Gas/Oil	505,106.00	505,106.00	237.40	282.86		
Totals		1253				1,087,991.00	511.36	609.27	1,089,111.63	988,025.45
Montgomery County Power Station	CT1		TX	100% CCGT	36,830.00	36,830.00	17.31	20.62		
Montgomery County Power Station	CT2		TX	100% CCGT	36,830.00	36,830.00	17.31	20.62		
Totals		0				73,660.00	34.62	41.25	73,735.87	66,892.06
Ninemile Point	3	135	LA	100% Gas/Oil	0.00	0.00	0.00	0.00		
Ninemile Point	4	748	LA	100% Gas/Oil	1,771,610.00	1,771,610.00	832.66	992.10		
Ninemile Point	5	763	LA	100% Gas/Oil	1,295,222.00	1,295,222.00	608.75	725.32		
Ninemile Point	6A	280	LA	100% CCGT	889,652.50	889,652.50	418.14	498.21		
Ninemile Point	6B	280	LA	100% CCGT	889,652.50	889,652.50	418.14	498.21		
Totals		1646				4,846,137.00	2,277.68	2,713.84	4,851,128.52	4,400,869.77
New Orleans Power Station	1	132	LA	100% Natural Gas	39,630.00	39,630.00	18.63	22.19		
Totals		132				39,630.00	18.63	22.19	39,670.82	35,988.76
Ouachita Power	CTGEN1	242	LA	100% Natural gas	460,654.00	460,654.00	216.51	257.97		
Ouachita Power	CTGEN2	244	LA	100% Natural gas	492,586.00	492,586.00	231.52	275.85		
Ouachita Power	CTGEN3	241	LA	100% Natural gas	620,900.00	620,900.00	291.82	347.70		
Totals		727			•	1,574,140.00	739.85	881.52	1,575,761.36	1,429,506.66
Perryville	1-1		LA	100% Gas/Oil	673,257.00	673,257.00	316.43	377.02		
Perryville	1-2	718	LA	100% Gas/Oil	673,257.00	673,257.00	316.43	377.02		
Perryville	2-1		LA	100% Gas/Oil	15,577.00	15,577.00	7.32	8.72		
Totals		718			•	1,362,091.00	640.18	762.77	1 363 493 95	1,236,940.91
R S Cogen ⁽⁴⁾	RS-5		LA	50% Natural gas	756,085.60	378,042.80	177.68	211.70	1,000, 100.00	1,200,0 10.01
R S Cogen ⁽⁴⁾	RS-6	425	LA	50% Natural gas	766,339.40	383,169.70	180.09	214.58		
Totals		425		55,6	7 00,000.10	761,212.50	357.77	426.28	761,996.55	691,271.64
R S Nelson	4	500	LA	100% Gas/Oil	0.00	0.00	0.00	0.00	701,990.33	031,271.04
R S Nelson ⁽⁶⁾	6	385	LA	80.9% Coal	1,182,981.00	957,031.63	258.40	4,842.58		
	Ü	885	٠.	00.376 0	1,102,001.00	957,031.63	258.40	4,842.58	962,132.61	070 000 00
Totals	2		мс	100% Gas/Oil	0.00				902,132.01	872,832.02
Rex Brown Rex Brown	3	349	MS MS	100% Gas/Oil	0.00	0.00	0.00	0.00		
	4		IVIO	100% Casion	0.00					
Totals		349	T\/	1000/ 0 /0!!	404 000 00	0.00	0.00	0.00	0.00	0.00
Sabine	1	230	TX	100% Gas/Oil	431,868.00	431,868.00	202.98	241.85		
Sabine	2	230	TX	100% Gas/Oil	0.00	0.00	0.00	0.00		
Sabine	3	420	TX	100% Gas/Oil	538,452.00	538,452.00	253.07	301.53		
Sabine	4	530	TX	100% Gas/Oil 100% Gas/Oil	886,574.00	886,574.00	416.69	496.48		
Sabine	5	480	TX	100% Gas/Oil	1,137,865.00	1,137,865.00	534.80	637.20		
Totals		1890				2,994,759.00	1,407.54	1,677.07	2,997,843.60	2,719,597.97
Sterlington	7AB	102	LA	100% Gas/Oil	375.50	375.50	0.18	0.21		
Sterlington	7C	101	LA	100% Gas/Oil	375.50	375.50	0.18	0.21		
Totals		203				751.00	0.35	0.42	751.77	682.00
J. Wayne Leonard	1A	926	LA	100% CCGT	1,235,776.50	1,235,776.50	580.81	692.03		
J. Wayne Leonard	1B		LA	100% CCGT	1,235,776.50	1,235,776.50	580.81	692.03		
Totals		926				2,471,553.00	1,161.63	1,384.07	2,474,098.70	2,244,464.59
Union Power Station ⁽⁷⁾	CT 1	495	AR	100% Gas	645,243.50	645,243.50	303.26	361.34		
Union Power Station	CT 2		AR	100% Gas	645,243.50	645,243.50	303.26	361.34		
Union Power Station	CT 3	495	AR	100% Gas	570,579.50	570,579.50	268.17	319.52		

Generating facility and EPA Acid Rain Unit ID	EPA Acid Rain Unit ID (Entergy ID if different)	Max capacity (MW)	State	Entergy equity share Primary of unit fuel(s)	Total unit CO2	Entergy equity share of unit CO2 emissions	CH4 emissions from generation	Entergy share N2O emissions from generation (3)	Total Facility CO2e in short tons	Total CO2e in metric tons
Union Power Station	CT 4		AR	100% Gas	570,579.50	570,579.50	268.17	319.52		
Union Power Station	CT 5	495	AR	100% Gas	416,668.50	416,668.50	195.83	233.33		
Union Power Station	CT 6		AR	100% Gas	416,668.50	416,668.50	195.83	233.33		
Union Power Station	CT 7	495	AR	100% Gas	452,022.00	452,022.00	212.45	253.13		
Union Power Station	CT 8		AR	100% Gas	452,022.00	452,022.00	212.45	253.13		
Totals		1980				4,169,027.00	1,959.44	2,334.66	4,173,321.10	3,785,973.22
Washington Parish Energy Center	1	361	LA	100% Gas	3,109.50	3,109.50	1.46	1.74		
Totals		361				3,109.50	1.46	1.74	3,112.70	2,823.80
Waterford	1	411	LA	100% Gas/Oil	23,921.00	23,921.00	11.24	13.40		
Waterford	2	411	LA	100% Gas/Oil	63,236.00	63,236.00	29.72	35.41		
Waterford	4		LA	100% Oil	1,033.00	1,033.00	0.49	0.58		
Totals		822				88,190.00	41.45	49.39	88,280.84	80,087.03
White Bluff	1	465	AR	57% Coal	2,833,416.00	1,615,047.12	436.06	8,172.14		
White Bluff	2	481	AR	57% Coal	1,990,664.00	1,134,678.48	306.36	5,741.47		
Totals		946				2,749,725.60	742.43	13,913.61	2,764,381.64	2,507,804.84

Totals

40,765,349.60	35,630,422.53	15,623.63	45,213.00
short tons CO2	short tons CO2	short tons CO2e	short tons CO2e
Total unit CO2 (1)	Entergy equity share of unit CO2 emissions	Entergy share CH4 emissions from generation (2)	Entergy share N2O emissions from generation (3)
CO2 fro	m CEM	CH4	N2O

35,691,259.16	32,378,565.66
Total Facility CO2e in short tons	Total CO2e in metric tons

- (1) CEM data reported to EPA Acid Rain program can be verified at EPA's Clean Air Market's Database located at http://camddataandmaps.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard&EQW_datasetSelection=
- (2) Emissions factor derived from CH4 (in CO2e) as percentage of emissions from CO2 for a specific fuel type. See "Emissions and Conversion Factors" for EPA emissions factors for specific fuels; emissions factor for natural gas used for all dual-fuel units as this represents the larger fuel input
- (3) Emissions factor derived from N2O (in CO2e) as percentage of emissions from CO2 for a specific fuel type. See "Emissions and Conversion Factors" for EPA emissions factors for specific fuels; emissions factor for natural gas used for all dual-fuel units as this represents the larger fuel input
- (4) Emission data obtained directly from the EPA's Database located at http://ampd.epa.gov/ampd/
- (5) While Entergy owns 42% of Big Cajun 2 Unit 3, our actual consumption of the MWhs generated from this facility varies from 42% to 45%. CO2 emission number shown is based on actual consumption of MWhs received from Fossil Operations.
- (6) During 2012, EWC (EAM Nelson Holdings, LLC) acquired 10.9% of this unit. Therefore, Entergy's overall ownership share of this unit increased to 80.9%

Additional Notes

- Emissions from Louisiana Station Plant 1 (Units 1A, 2A, 3A, 4A, 5A) are not included in the inventory; these units exist for the sole use of Exxon under a long term lease agreement.
- The following units were removed from the Inventory in 2014 Lynch 2&3, Couch 1&2, Lake Catherine 1-3, Louisiana Station 2 (units 10-12), Ninemile 1&2, Nelson 3, Richie 1&2, and Sterlington 10. These units are either permanently retired (decommissioned in some cases) or are in extended reserve shutdown and are not expected to return to service.
- The following units were ADDED to the inventory in 2014 Ninemile 6A and 6B these units came online during December of 2014.
- The Acadia power plant has two units Unit 1 (CT1 & CT2) is owned by CLECO, while Unit 2 (CT3 & CT4 as shown above) is owned by Entergy.
- Michoud Plant units removed from inventory in 2018 Inventory the units were permanently retired in January 2016 and scheduled for demolition

Small combustion sources at all generation stations - Updated for 2020

Small stationary combustion sources were initially calculated for all known equipment co-located at generating stations using parameters (such as max energy input/hour) developed in internal emissions compliance documents and assumed equipment capacity factors.

Starting in 2013, Entergy reported the previous year's GHG (CO2e) emissions from small sources co-located at Fossil plants in compliance with the EPA Mandatory Reporting Rule (General Stationary Fuel Combustion - Subpart C).

These updated values are substituted for the older, 2005 calculations in order to be consistent with mandatory GHG reporting. Nuclear estimates continue to rely on the 2005 calculations unless otherwise noted. The Thermal assets were divested in late 2013, so these assets and emission are removed from the inventory.

More detail on each of these facilities, the specific data collection methods, and the calculation methodology, can be found in the GHG Monitoring Plan required by the EPA Mandatory Reporting Rule.

	CO2e Emissions reported under Mandatory Reporting Rule Mandatory Plant (short tons of all gases in 2019) (metric tons		
Plant			Comments
_	[obtained from Power Generation unless otherwise noted]	[obtained from Power Generation unless otherwise noted]	
Fossil fuel generating stations			
Attalla	0.0	0.0	
Baxter Wilson	55,502.1	50,350.7	
Calcasieu	0.0	0.0	
Choctaw	23.5	21.3	
Gerald Andrus	23,518.9	21,336.0	
Hinds County	720.6	653.7	
Hot Spring	0.0	0.0	
Independence	2,230.1	2,023.1	(~50% ownership share)
Lake Catherine	99,322.9	90,104.2	
Lewis Creek	95,376.3	86,523.9	
Little Gypsy	1,375.6	1,247.9	
RS Nelson	0.0	0.0	(80.9% ownership share)
Ninemile Point	4,010.3	3,638.1	
Ouachita	1,911.7	1,734.3	
Perryville	3,431.6	3,113.1	
Rex Brown	72.2	65.5	
Sabine	12,336.8	11,191.8	
St Charles	0.0	0.0	No Subpart C affected sources
Union	0.0	0.0	No Subpart C affected sources
Waterford	0.0	0.0	
White Bluff	1,899.2	1,722.9	(57% ownership share)
Power Gen TOTAL	301,731.8		

Nuclear generating stations ⁽²⁾⁽³⁾	Plant total small sources CO2e (short tons using 2005 estimate calculations)
River Bend	687.0
Indian Point 2	6,186.0
Indian Point 3	80.0
Palisades (1)	7,757.0
Waterford 3	7,042.0
Grand Gulf	11,131.0
Arkansas Nuclear 1&2	11,728.0
Nuclear TOTAL (short tons)	44,611.0

Closed April 30, 2020. Emissions are prorated for four months of operation in 2020. Slated to close in 2021

Slated to close in 2022

All small source totals 346,342.8

- (1) Estimated based on average of other units

- (1) Estimated based on average of other units
 (2) Vermont Yankee entered decommission status and did not operate beginning in 2016. Has been removed.
 (3) James Fitzpatrick was sold in 2017 and has been removed
 (4) Mablevale, Michoud, and Willow Glenn removed from inventory in 2018 since units have been retired, demolished, or scheduled for demolition.
 (5) Harrison County and NISCO removed from inventory in 2018 since Entergy has no equitiy share in ownership. Entergy only operates these units.
 (6) Pilgrim ownership was transferred to Holdtec on 8/26/2019. Pilgrim has been removed for the 2020 inventory.

Direct Emissions from fossil fuel usage for company mobile fleet ("Mobile Combustion")

Note: The information below was collected and results calculated based on 2016 data.

Beginning in 2013, the GWP for N2O and CH4 was modified based on the EPA final rule effective 1/1/14.

		Units consumed	
Fuel Description	Fuel Code	(gal)	Assumptions/Comments
Diesel	D	2,671,325	Based on 2017 Entergy data provided by
			Carolanne Nichols, it is assumed that totals for
Gasoline	G	842,819	all bi-fuel categories are split at a 90/10 ratio between constituent fuel types and are
			calculated as such. Bi-fuels are separated below
BiFuel-Gasoline/Ethanol	S	705,341	into its constituent fuel type category and
BiFuel-Gasoline/CNG	Α	19	emissions calculated. Green Plug-In (JEMS)
BiFuel-Gasoline/LPG	В	25	units run on diesel on the highway and electricity on the job site.
BiFuel-Diesel/Electricity	F	0	on the job one.
Propane	Р	77	CNG is measured in Gallons of Gasoline Equivalency or GGE. One gallon of CNG or GGE
CNG	С	62	has the same energy value as a gallon of
LPG	L	253	gasoline.
Green Plug-In JEMS	J	35,557	"Unknown" split evenly (50/50) between diesel
BiFuel-Gasoline/Electricity	н	1,770	and gasoline.
Unknown	-	0	
Jet fuel		141,001	Total 2016 Fuel Purchase - from John Shilstone

Total gallons consumed

4,398,249

Total units of each fuel type	CO2 using E Leade		CO2 using WR				
Fuel	Total units consumed (GALLONS) - from inputs above	conversion to energy content (MMBtu/gallon)	Total MMBtu consumed	Emissions Factor (lbs CO2/MMBtu)	Total CO2 Emissions (short tons)	Emissions Factor (kg CO2/Gallon)	Total CO2 Emissions (short tons)
Diesel	2,706,882	0.1387	375,445	159.68	29,975	10.15	30,285
Gasoline	1,479,436	0.1251	185,077	156.44	14,477	8.81	14,367
Ethanol (E85)	70,534	0.0843	5,946	149.59	445	5.56	432
CNG	64	0.1251	8	116.41	0	See note	0
LPG	256	0.092	24	138.76	2	5.79	2
Propane	77	0.092	7	138.32	0	5.79	0
Jet fuel	141,001	0.135	19,035	154.72	1,473	9.57	1,487
Totals	4,398,249		585,542		46,372		46,575

Note: Emissions from Ethanol are considered "biogenic" emissions are do not contribute to net CO2 additions to the atmosphere. They are include with fossil fuel CO2 because it is de minimus.

Regarding CNG, no SCF measurement is available; used the EPA CL number as a proxy.

Direct Emissions of N2O and CH4 from mobile fleet ("Mobile Combustion")

The calculation below uses conservative N2O and CH4 emissions factors to estimate these emissions from mobile sources.

The emissions factors are from EPA Climate Leaders Guidance for construction vehicles.

NOTE - Emission factors for these gases were not available for all fuel types - a conservative approach was used by using the emission factor for diesel.

N2O from mobile sources										
N2O	gallons consumed	g N2O/gal fuel	total kg N2O	short tons	CO2e short tons					
Gasoline	1,479,436	0.22	325.48	0.366	108.92					
Diesel	2,706,882	0.26	703.79	0.790	235.53					
Jet Fuel	141,001	0.26	36.66	0.041	12.27					
Propane	77	0.26	0.02	0.000	0.01					
CNG	64	0.26	0.02	0.000	0.01					
LPG	256	0.26	0.07	0.000	0.02					
Ethanol	70,534	0.26	18.34	0.021	6.14					
total					362.89					
					-					
	CH4	from mobile sour	ces							
CH4	gallons consumed	g CH4 /gal fuel	total kg CH4	short tons	CO2e short tons					
Gasoline	1,479,436	0.50	739.72	0.831	20.77					
Diesel	2,706,882	0.58	1,569.99	1.763	44.08					
Jet Fuel	141,001	0.58	81.78	0.092	2.30					
Propane	77	0.58	0.04	0.000	0.00					
CNG	64	0.58	0.04	0.000	0.00					
LPG	256	0.58	0.15	0.000	0.00					
Ethanol	70,534.10	0.58	40.91	0.046	1.15					
total					68.30					
				•						
Total N2O and CH4 CO2e					431.18					
Total Estimated Emission	ns from Mobile	Sources (shor	rt tons CO2e)		47,006					

Emissions from natural gas from T&D operations

The calculation for Gas Operations below is based on as reported data from the GHG Summary Report for 2019. The Spindletop Gas Storage facility emissions are calculated using GRI emission factors (see notes below).

Gas Operations	cO2 equivalent emissions from facility subparts C-II, SS, and TT (metric tons) Subpart W, Fugitive	Total C02 equivalent emissions (short tons)
Entergy Louisiana, L.L.C. Gas Business	9,928.5	10,944.3
Entergy New Orleans, Inc. Gas Business	23,123.6	25,489.4
SUB-TOTAL		36,433.7

Spindletop Storage					
Storage facilities	# storage facilities	Emissions factor (metric ton CH4/station-yr)	Total metric tons CH4	Total short tons CH4	Total short tons CO2e (Cell E x 25)
Fugitive Emissions from Storage Facilities	1	675.4	675.40	744.50	18,612.50
Vented Emissions from Storage Facilities	1	217.3	217.30	239.53	5,988.30
SUB-TOTAL					24,600.80

See note 3 See note 4

TOTALS FROM FUGITIVE NATURAL GAS

61,034 short tons CO2e

GENERAL NOTES:

- Source for emissions factors by equipment type is the Gas Research Institute (GRI), which provides factors in metric units only.
- Fugitive and oxidized CO2 are known sources of GHG emissions from a natural gas T&D system; however these were not calculated as they are determined to be de minimus compared to CH4 from this source.

SPECIFIC NOTES:

- (1) Compressors are assumed to be for natural gas transmission, not storage.
- (2) general emissions factor used for vented gas; GRI provides emissions factors for specific equipment venting.
- (3) EF from API Table 6-1, (American Petroleum Institute), Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry.
- (4) EF from GRI

Direct Emissions of Escaped SF6 in Electricity T&D System ("Fugitive Emissions")

Note: The information below was as reported to the EPA under Subpart DD of the Mandatory GHG Reporting Rule.

More detail on the specific data collection methods, and the calculation methology, can be found in the GHG Monitoring Plan required by the EPA Mandatory Reporting Rule.

2019 Fugitive SF6 Emissions Estimate					
SF6 Emissions (short tons) (1)	Global Warming Potential (GWP) (2)	Total CO2 Equivalent Emissions (short tons)	Total CO2 Equivalent Emissions metric tons)		
7.39	22,800	168,427.5	152,794.7		

⁽¹⁾ Converted 14,774.34 pounds to short tons - the amount of emissions reported for RY 2019.

Direct Emissions of Fugitive HFCs in all utility cooling and A/C equipment

This sheet contains calculations for all sources of fugitive HFCs. HFCs from all sources are considered de minimus (i.e. insignificant in the Entergy corporate total). The activity data required to provide the highest level of accuracy is difficult and impractical to obtain for such a small source. Instead, emissions factors have been created based on national averages for a number of variables to provide a rough estimate of these emissions. The methodology behind these emissions factors is found below.

These CO2e totals are calculated using data, provided by Real Estate as of December 31, 2016, that does not change significantly between inventory years. These same data and emissions totals are used each year.

2010 Update - Facilities indicates that there is no significant change to these numbers; therefore, these numbers will continue to be carried forward each year.

2013 Update - carried historical data forward; however, updated the GWP consistent with an EPA final rule that became effective on 1/1/14.

2014 Update - removed the Thermal Operations facilities, as these were sold in late-2013. 2015 Update - No changes made

2016 Update - Values updated as of December 31, 2016

2017 Update - No changes made 2018 Update - No changes made 2019 Update - No changes made 2020 Update - No changes made

	square footage air-		Facility fugitive HFC
	conditioned	(short tons CO2e/sq ft)	(short tons CO2e)
		*	
Entergy owned space	2,158,989	0.00078	1,683
Entergy capital lease space	1,708,276	0.00078	1,332
Generation plant space	1,700,000	0.00078	1,325
Total Fugitive HFCs	5,567,265		4,340
Generation plant space assumes 50 000	sa ft nernlant: 3/	1 nlants assumed	

From Nuclear facility			
			Facility fugitive HFC (short tons CO2e)
·	Λ	1300	

Entergy nuclear facilities do not use HFCs for cooling

From all Entergy-owned vehicles			
		EF: HFC as % of CO2 emissions **	Facility fugitive HFC (short tons CO2e)
Vehicular A/C	47,006	3.50%	1,645

Total CO2 from all mobile source fuels are included

Total fugitive HFC emissions

5,985 short tons CO2e

* Calculation for estimating fugitive HFC emissions from building space using A/C

The calculation used in calculating the emissions	Average cooling	HFCs in chiller	Annual HFC loss factor	Total Annual HFC losses	Total Annual HFC	Total Annual HFC	Total Annual HFC
factor for metric tons of CO2e fugitive HFC.	capacity of chiller	(kg HFC/tons of cooling)	(percent)	(MT HFC/1000 ft2)	losses	losses	losses
	(ft2/ton of cooling				(MT CO2e)/1000 ft2	(MT CO2e)/ ft2	(short tons CO2e)/
	capacity)						ft2
	280	1.2	15%	0.000642857	0.71	0.00071	0.00078
	Source: ASHRAE	Source:	Source: EPA Climate		This is the emissions	Emissions factor for	Emissions factor for
	(http://www.themcder	http://www.usgbc.org/LEE	Leaders Gudance, January		factor that is applied	MT CO2e per ft2.	short tons CO2e per
	mottgroup.com/News	D/tsac/energy.asp	2004. Note: This estimate is		to the square footage		ft2; conversion factor
	worthy/HVAC%20Issu		the source of the greatest		of air-conditioned		1.1023
	es/Rule%20of%20Thu		uncertainty in the		space. This EF		
	mb%20Sizing.htm)		calculation, since the range		includes the global		
	Note that this is a		is 2-15%, and the average is		warming potential for		
	conservative estimate		probably more like 5%.		HFC 134a (1,100).		
	a reasonably designed						
	building should be						
	17 400						

Calculation to estimate HFCs from mobile A/C as percentage of CO2 emissions from mobile sources using national averages for equipment leakage and miles/gallon

	HF	C Emissions Estin	nate			CO2 Emissions	Estimate		Emissions factor
Vehicle type			(percentage)	CO2 emissions (kg CO2e/yr-veh); GWP=1100	Miles per gallon			(kg CO2/yr-veh)	Emissions factor: HFC emissions (CO2e) to CO2 (as %)
Car		0.8	20%	176	20	15,000	8.87	6,653	2.6%
light truck		1.2	20%	264	15	15,000	8.87	8,870	3.0%

Power purchased to serve utility customers Controllable power purchases - 2020							
Sonti Ghabic powe	51 parenta363 - 2020					20	019
				Total Entergy purchased from plant	Unit/Plant-Specific Emission Factor (Ibs CO2/MWh), Based on Total Output [from eGRID2019 data, released 02/23/2021	CO2 emissions from puchased power (short tons) Jusing eGRID Unit-Specific	
ode	Plant description	FACILITY CODE (SPO)		(MWh)	unless otherwise noted]	Factors (when available)]	Comments/Notes
			LA	60,574.0			
			LA	2,380,434.2	762.5		
			TX	1,143,051.8		497,187.5	
			TX	142,967.8		105,864.1	
			TX AR	26,352.0 154,197.9			
			LA	20,829.1	- :	•	
			LA	1.138.208.0		719,819.8	
			LA	2,827,131.9		1,122,427.9	
			LA	167,000.4			
			AR	19,320.0	2,491.2	24,064.6	
tals				8,080,067.1		3,377,363.9	short tons CO2
		•		•	•	•	
	ontrolled purchases (SERC MS Valley Total Output Rate, eGRID2019)				lbs/MWh		short tons CO2e
14 emissions from co	ontrolled purchases (SERC MS Valley Total Output Rate, eGRID2019)			0.043	lbs/MWh	4,343.0	short tons CO2e

^{* -} some units may be in different control areas or eGRID subregions; however, impact to the overall GHG inventory is expected to be negligible.

Total CO2e from Controllable Purchases

TOTAL 3,388,930.5 short tons CO2e

Indirect Emissions associated with purchased power CO2 emissions from T&D losses of purchased power on Entergy system CH4 emissions from T&D losses of purchased power on Entergy system	Totalpchsd power MWh 8,080,067	Loss factor % 3.081%	Total power lost MWh 248,968	104,065.3 short tons CO2 18.7 short tons CO2e	
N2O emissions from T&D losses of purchased power on Entergy system			TOTAL	1,595.1 short tons CO2e 105,679.1 short tons CO2e	

Grid Power purchased for EWC plants/operations (non-Entergy power)

			eGRID2019 Emission Factor	Estimated Emissions
Plant and associated facilities (1,2,3)	2020 Electricity Usage (kwh)	eGRID Subregion	(Ib CO2e/MWh)	(short tons CO2e)
Indian Point Energy Center (IPEC) Unit 2	13,593,070	NYCW	556.06	3,779.3
Indian Point Energy Center (IPEC) Unit 3 (4)	43,108,500	NYCW	556.06	11,985.4
Palisades (PAL)	9,460,150	RFCM	1,197.00	5,661.9

TOTAL 21,426.5 short tons CO2e 66,161,720 TOTAL

- (1) Provided by Anthony Dichman based on Station Service Purchases from ISOs. Calculations on file.
 (2) Vermont Yankee entered decommission status and did not operate beginning in 2016 according to Nuclear, their power usage is negligible; so this was removed beginning in 2016.
 (3) There were no purchases for Fitzpatrick or Pilgrim in 2020, as these plants were sold prior to 2020. They have been removed from the inventory beginning in 2020.
 (4) Indian Point 3 data is through April 30, 2020 when it permanently shut drown and not operational.

*** 2014 NOTE - Due to the transition in late 2013 to MISO, Entergy is no longer quantifying emissions from "non-controllable purchases" due to the fact that there is a risk that double counting may occur.

Operating Company	Generation GWh	Purchases GWh	Total Power	Losses	% Lost
ÉAI	27,517	4,700	32,217	990	0.030729118
ELL	42,854	21,567	64,421	1,672	2.595426957
EMI	9,060	6,723	15,783	849	5.379205474
ENOI	2,978	4,973	7,951	151	1.899132185
ETI	6,262	15,089	21,351	559	2.618144349
SERI	9,928		9,928	(12)	-0.120870266
ELIM		(15,051)	(15,051)		
TOTALS*	98,599	38,001	136,600	4,209	0.030812592

*Per Kyle Sennino

Source: 2018 Stat Rpt Page 36 4,209.00 Total Loss 136,600.00 Total Power 0.0308 % Loss

Product Combustion - Emissions from combustion of Natural Gas distributed to retail customers

Values below represent those reported in the RY 2019 GHG reports submitted by Gas Operations and provided to SEP for each location.

Gas Operation	CO2 equivalent emissions from supplier subparts LL-QQ (metric tons) Subpart NN Product Combustion	Total CO2 equivalent emissions (short tons)
Entergy Louisiana, L.L.C. Gas Business	391,435.5	431,483.3
Entergy New Orleans, Inc. Gas Business	482,664.2	532,045.6
TOTAL	874,099.7	963,528.8

Employee Commuting Emission Calculations

Commuter Travel Calculations

Commuting Method (more than 75% of time)							
Number of Employees =	14000						
Walkers =	144						
Bikers =	44						
Carpoolers =	1154						
Vanpoolers =	33						
Public Transporters =	67						
Individual Drivers =	12558						
Total	14000						

Survey # (n)	%
13	1.03%
4	0.32%
104	8.24%
3	0.24%
6	0.48%
1132	89.70%
1262	100.00%

Commuting Distance (miles one-way)						
	Low	Avg	High	# Employees	SURVEY RESPONSES (#)	SURVEY RESPONSES (%)
	0.0	0.5	0.9	202	25	1%
	1.0	3.0	5.0	1553	192	11%
	6.0	8.0	10.0	2572	318	18%
	11.0	15.5	20.0	3227	399	23%
	21.0	25.5	30.0	2548	315	18%
	31.0		40.0	3898	482	28%
Total	70.0	88.0	105.9	14000	1731	100%

Distribution of Commuting Method by Miles										
	Individual Drivers	Carpoolers	Vanpoolers	Public	Bikers	Walkers				
	181	-	-	1	4	108				
	1393	-	-	7	40	36				
	2307		-	12	-					
	2895	-	-	15	-	-				
	2285	-	-	12	-	-				
	3497	1154	33	19	-	-				
Total	12558	1154	33	67	44	144				

Method of Transportation	Miles Trave	led by Method (using midpoint of	mileage range)	Estimated Emissions					
	one way	round trip	yearly miles	yearly gallons	lbs	short tons	met tons		
Walkers =	157	314	66811	-	-	-			
Bikers =	122	244	51890	-	-	-			
Carpoolers =	40957	81914	17447772	290796	5815924	2908	2638		
Vanpoolers =	1181	2363	503301	3355	67107	34	30		
Public Transporters =	1325	2650	564467	2258	45157	23	20		
Individual Drivers =	249991	499981	106496040	4259842	85196832	42598	38645		
Total			125130281	4556251	91125020	45563	41334		

Employee Commuter Travel 2014

Commuting method (more than 75% of the time)	Miles travelled per year	Total emissions kg CO2e	Total emissions short tons CO2e	Total Emissions metric tons CO2e	% total commuting emissions
Individual car	106,496,040	39,890,328	43,971	39,891	77.8%
Vanpool	503,301	268,927	296	269	13.1%
Public Transportation	564,467	77,304	85	77	3.8%
Carpool	17,447,772	6,535,429	7,204	6,535	5.3%
Bikers	51,890	-	-	-	0.0%
Walkers	66,811	-	-	-	0.0%
Total	125 130 281	46 771 989	51 557	46 772	100.0%

Commuting method (more than 75% of the time)	Miles travelled per year	Greenhouse gas	Total emissions kg CO2e	Total emissions short tons CO2e	Total Emissions metric tons CO2e	% total commuting emissions
Individual car	106,496,040	CO2	38,764,559	42,730	38,765	82.9%
		CH4	69,329	76	69	0.1%
		N2O	1,056,441	1,165	1,056	2.3%
Vanpool	503,301	CO2	261,213	288	261	0.6%
		CH4	380	0.42	0.38	0.0%
		N2O	7,333	8	7	0.0%
Public Transportation	564,467	CO2	77,077	85	77	0.2%
		CH4	25	0.03	0.02	0.0%
		N2O	201	0.22	0.20	0.0%
Carpool	17,447,772	CO2	6,350,989	7,001	6,351	13.6%
		CH4	11,358	12.52	11.36	0.0%
		N2O	173,082	191	173	0.4%
Bikers	51,890	CO2	-	-	-	0.0%
		CH4	-	-	-	0.0%
		N2O	-	-	-	0.0%
Walkers	66,811	CO2	-	-	-	0.0%
		CH4	-	-		0.0%
		N2O	-	-		0.0%
Total	125,130,281		46,771,988	51,557	46,772	100.0%

Calculation for Public Transportation	# of miles	Total emissions kg CO2e
50% Bus	282,233	30,246
5% Intercity Rail	28,223	5,231
5% Commuter Rail	28,223	4,864
40% Transit Rail	225,787	36,962
Total	564,467	77,304

EPA Methodology

E=VM1"(EFco2 + EFCH4"U.UZ I + EFN20"U.310)
E= total CO2e
VMT= vehicle miles travelled per year
EFco2= CO2 emissions factor
EFCH4= CH4 emissions factor
EFN20= N2O emissions factor
0.021= conversion factor
0.310= conversion factor
*used for individual car, carpool and vanpool

=PMT*(EFco2 + EFCH4*0.021 + EFN20*0.310)
= total CO2e
PMT= passenger miles travelled per year
Fco2= CO2 emissions factor
FCH4= CH4 emissions factor
FN20= N2O emissions factor
0.021= conversion factor
0.310= conversion factor

Method of travel	EFco2 (kg Co2/vehicle-mile)	EFcH4 (g CH4/vehicle-mile)	EFN20(g N2O/vehicle-mile)
Individual car	0.364	0.031	0.032
Vanpool	0.519	0.036	0.047
Carpool	0.364	0.031	0.032
Bus	0.107	0.0006	0.0005
Short haul airline (domestic)	0.185	0.0104	0.0085
Medium haul airline (continental)	0.229	0.0104	0.0085
Long haul airline (intercontinental)	0.277	0.0104	0.0085
Itercity rail	0.185	0.002	0.001
Commuter rail	0.172	0.002	0.001
Transit rail	0.163	0.004	0.002

EPA Methodology sourced from EPA website http://epa.gov/climateleadership/documents/resources/commute_travel_product.pdf http://www.epa.gov/climateleadership/documents/resources/mobilesource_quidance.pdf

"used for bus, air and rail travel

Assumptions
9/80 schedule - all employees commute nine days every two weeks
2 weeks of vocation
12 holidars
For a total of 213 work days per employee per year
Walkers and bike riders all put into 0 to 5 miles
Walkers and bike riders all put into 0 to 5 miles
Carpoders and Vanocobers all put into the over 30 miles category
Used mitigorit of milesper ranges surveyed
Assuming 20 pounds of CO2 emitted per gallon of fuel burned
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EPA Climate Leaders Emissions Factors for Fossil Fuel and Biomass Combustion

The emissions factors below have been updated from the EPA Climate Leaders GHG inventory Protocol, October 2004 and with any other EPA Final Rules.

	CO2 Emissions kg		C	02 Emissions	lbs		CH4 Emis	sions		N20 Emissions							
Fuel type	Heating Value (HHV): custom heating values should be used if available	Carbon content coefficient (kg C/MMBtu) (based on HHV)	Fraction oxidized	EPA emission factor (kg CO2/MMBtu (HHV)*	EPA emission factor (kg CO2/mass or volume unit)	EPA emission factor (kg CO2/mass or volume unit)	EPA emission factor (lbs CO2/MMBtu (HHV)*	EPA emission factor (lbs CO2/mass or volume unit)	EPA emission factor (lbs CO2/mass or volume unit)	EPA emission factor (g CH4/MMBtu)	EPA emission factor (kg CO2e/MMBtu) GWP=25	EPA emission factor (lbs CO2e/MMBtu)	CH4 (CO2e) emissions factor (Ibs CO2e CH4/Ib CO2)	EPA emission factor (g N20/MMBtu)	EPA emission factor (kg CO2e/MMBtu) GWP=298	EPA emission factor (lbs CO2e/MMBtu)	N2O (CO2e) emissions (lbs CO2e N2O/lb CO2)
Liquid fossil	MMBtu/bbl				kg CO2/gallon	kg CO2/bbl		lbs CO2/gallon									
Gasoline / petrol	5.253	19.34	0.99	70.95	8.79	369.18	156.44	19.38	814.04								
Kerosene Jet Fuel	5.670 5.670	19.72 19.33	0.99	71.58 70.17	9.66 9.47	405.88 397.74	157.84 154.72	21.31 20.88	894.97 877.02	Note: CH4/N2O	emissions facto	ors for all mobi		dependent on many	variables; for	mobile source	es consult the
													EPA Guidai	nce Protocol			
Aviation gasoline	5.048	18.87	0.99	68.50	8.23	345.66	151.04	18.15	762.18	1.8 (ind)	0.015			E4 ('1)			
Distillate fuel (# 1,2,4, diesel)	5.825	19.95	0.99	72.42	10.08	423.36	159.68	22.23	933.51	2.7 (elect gen)	0.045 0.068	0.099 0.149	0.0006	.54 (ind) .54 (elect gen)	0.16092 0.16092	0.355 0.355	0.0022 0.0022
Residual fuel oil (#5,6)										1.8 (ind)	0.045	0.099	0.0006	1.8 (ind)	0.16092	0.355	0.0021
residual fuel oil (#5,0)	6.287	21.49	0.99	78.01	11.68	490.44	172.01	25.75	1,081.42	2.7 (elect gen)	0.068	0.149	0.0009	2.7 (elect gen)	0.16092	0.355	0.0021
LPG	3.861	17.25	0.99	62.62	5.65	237.45	138.07	12.47	523.58								
Propane	3.824	17.2	0.99	62.44	5.71	239.90	137.67	12.59	528.98								
Ethane	2.916	16.25	0.99	58.99	4.12	172.91	130.07	9.08	381.27								
n-Butane	4.326	17.72	0.99	64.32	6.66	279.80	141.83	14.69	616.96		Note: C	H4/N2O emis	sions factors fo	or all mobile sources	are dependen	t on many va	on many variables;
Isobutane	4.162	17.75	0.99	64.43	6.42	269.52	142.07	14.15	594.29			for	mobile sources	s consult the EPA G	uidance Protoc	ol	
E85	e EPA Guidance					0.00	0.00		0.00								
CNG	1,027	14.47	0.995	52.79	.054 /cf			.12 /cf									
LNG					5.91 /gal			13.01 /gal									
Petroleum coke	6.024	27.85	0.99	101.10	609.00		0.00	0.00									
Gaseous fossil	MMBtu/mcf				cu. ft.			cu. ft.									
Natural gas (dry)	1.027	14.47	0.995	52.79	0.0542		116.41	0.1195		4.75 (ind) 0.95 (elect gen)		0.262 0.055	0.00225 0.00047	0.095 (ind) 0.095 (elect gen)	0.028 0.030	0.062 0.066	0.0005 0.0006
Solid fossil	MMBtu/short tor		0.000	02.10	short ton		110.11	short ton		oloo (oloot goll)	0.020	0.000	0.00011	oloco (oloco gorr)	0.000	0.000	0.0000
Anthracite				400.50						10.0 (ind)		0.551	0.00265	1.4 (ind)	0.42	0.92	0.0044
P	25.09	28.26		102.58	2,573.83		226.20	5,675.30		1.0 (elect gen)	0.025	0.055	0.00027	1.4 (elect gen)	0.48	1.05	0.0051
Bituminous coal	24.93	25.49		92.53	2,306.74		204.03	5,086.36					% of "unspecified of			% of	"unspecified coal"
Sub-bituminous coal	17.25	26.48		96.12	1,658.11		211.95				ι	Jse the CH4/N	I2O emissions	factors above for all	coal types		
Lignite	14.21	26.3	0.99	95.47	1,356.61		210.51	2,991.33									
Coke	24.80	27.85	0.99	101.10	2,507.17		222.92										
Unspecified (elec gen)	20.63	25.98	0.99	94.31	1,945.56		207.95	4,289.96									
Unspecified (indus)	23.03	25.75	0.99	93.47	2,151.84		206.11	4,744.81									
Biofuels Wood and wood waste	15.38 MMBtu /shor	25.6	0.995	92.93			204.91			30.1 (ind/elect	0.753			4.01 (ind/elect gen)	1.19	2.63	
Landfill gas (50/50)	502.5 Btu/cu ft.	14.2	0.995	51.81	.0260 /cf		114.24	.05733 /cf						fuels are less than			
Biodiesel					9.29 /gal			20.48 /gal		Note: CH4/N2O	emissions facto	rs for all mobil	e sources are	dependent on many	variables; for n	nobile source	s consult the
Ethanol (100)	3.539 MMBtu/bbl	17.99		65.30			143.99										
Note: it is assumed the combustion	of hiomage and hiofugle	door not contribute to	not CO2 omio	sciono Ao o rocult Bo	stoore are required to li	at hiamana CO2 amian	ione in terms of total	al ann but the emission	on are not included i	the everall CO3 equi	alont omingions con	oroto inventory					

Note: it is assumed the combustion of biomass and bidfuels does not contribute to net CO2 emissions. As a result, Partners are required to list biomass CO2 emissions in terms of total gas but the emissions are not included in the overall CO2-equivalent emissions corporate inventory.

Conversion Factors used in this inventory

1 metric ton CH₄

1metric ton N₂O

1 metric ton carbon

Mass			
1 pound (lb)	453.6 grams (g)	0.4536 kilograms (kg)	0.0004536 metric tons (tonne)
1 kilogram (kg)	2.205 pounds (lb)		.0011023 short tons
1 short ton (ton)	2'000 pounds (lb)	907.2 kilograms (kg)	.9072 metric tons
1 metric ton	2'205 pounds (lb)	1'000 kilograms (kg)	1.1023 short tons (tons)
Volume			
1 cubic foot (ft 3)	7.4805 US gallons (gal)	0.1781 barrel (bbl)	
1 cubic foot (ft 3)	28.32 liters (L)	0.02832 cubic meters (m ³)	
1 US gallon (gal)	0.0238 barrel (bbl)	3.785 liters (L)	0.003785 cubic meters (m ³)
1 barrel (bbl)	42 US gallons (gal)	158.99 liters (L)	0.1589 cubic meters (m ³)
1 litre (L)	0.001 cubic meters (m ³)	0.2642 US gallons (gal)	
1 cubic meter (m ³)	6.2897 barrels (bbl)	264.2 US gallons (gal)	1,000 liters (L)
Energy			
1 kilowatt hour (kWh)	3,412 Btu (btu)	3,600 kilojoules (KJ)	
1 megajoule (MJ)	0.001 gigajoules (GJ)		
1 gigajoule (GJ)	0.9478 million Btu (million btu)	277.8 kilowatt hours (kWh)	
1 Btu (btu)	1,055 joules (J)		
1 million Btu (million btu)	1.055 gigajoules (GJ)	293 kilowatt hours (kWh)	
1 therm (therm)	100,000 btu	0.1055 gigajoules (GJ)	29.3 kilowatt hours (kWh)
Other			
kilo	1,000		
mega	1,000,000		
giga	1,000,000,000		
tera	1,000,000,000,000		
1 psi	14.5037 bar		
1 kgf / cm ³ (tech atm)	1.0197 bar		
1 atmosphere (atm)	0.9869 bar	101.325 kilo pascals	14.696 pounds per square inch (psi
1 mile (statue)	1.609 kilometers	-	· · · · · · · · · · · · · · · · · · ·
• •			

21 metric tons CO₂ equivalent

310 metric tons CO₂ equivalent 3.664 metric tons CO₂

Global Warming Potentials and Atmospheric Lifetimes (years) Gas Atmospheric Lifetime GWP ^a					
Carbon dioxide (CO2)	50-200	1			
Methane (CH4) ^{b,c}	12 +/- 3	25			
Nitrous oxide (N2O) ^c	120	298			
HFC-23 ^c	264	14,800			
HFC-125°	32.6	3,500			
HFC-134a ^c	14.6	1,100			
HFC-143a ^c	48.3	4,470			
HFC-152a ^c	1.5	124			
HFC-227ea ^c	36.5	3,220			
HFC-236fa ^c	209	9,810			
HFC-4310mee ^c	17.1	1,640			
CF4	50,000	6,500			
C2F6	10,000	9,200			
C4F10	2,600	7,00			
C6F14	3,200	7,400			
SF6 ^c	3,200	22,800			

Source: Unless otherwise noted by note 'c' below, IPCC's Fourth Assessment Report (2007) GWPs.

a using a 100 year time horizon

b The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor.

c Effective January 1, 2014, the Environmental Protection Agency, through issuance of a final rule, raised the GWP for methane and several classes of hydrofluorocarbons, while lowering the GWP for both nitrous oxide and sulfur hexafluoride.

The indirect effect due to the production of CO2 is not included.

Color key to calculations in the Entergy GHG Inventory

The colored heading cells in each worksheet of this GHG inventory enable inventory managers and users update and understand the role of each step of the calculation process.

Yellow	Specific fuel or gas calculated	This heading identifies the fuel and emissions being calculated below it.
Red	Annual activity data input	This is an input cell for company activity or usage data related to this emissions source for a given facility, source or even corporate-wide. Examples of input data are gallons of gasoline, lbs of CO2 (provided as CEM data), or square footage of building space occupied by the company. This activity data is currently identified in the units provided during the completion of PNM's GHG inventory for years 2001-2003. For some de minimus emissions sources (such as fugitive HFCs from building space
Orange	Calculation constant	This cell contain as constant (coefficient) such as a conversion factor or unit measurement and does not to be changed annually unless there is a change to an emissions factor, input units or facility status.
Green	Calculation conversion subtotal	This figure is calculated automatically and is a subtotal or unit conversion resulting from a spreadsheet calculation such as MMBtu converted from mcf or gallons. This cell contains an emissions or conversion factor in its formula.
Blue	Emissions source total	This figure is calculated automatically and is a total of CO2e (CO2-equivalent) for a given emissions source (e.g. a facility or equipment type) and the sum of individual sources is carried into the annual corporate emissions table. This cell contains an emissions or conversion factor in its formula.
123.45	Emissions source total	Bolded cells contain a figure for total emissions in CO2e for that source and are carried to the corporate emissions totals sheet for emissions source comparison.