Compilation and Analysis of New Mexico's Greenhouse Gas Emissions Inventory Data 2008 – 2010

Prepared by: New Mexico Environment Department's (NMED) Air Quality Bureau (AQB), Planning Section, Emissions Inventory Group

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Introduction and Background

This paper provides a summary and analysis of greenhouse gas (GHG) emissions data reported by Title V facilities during 2008 – 2010, and non-Title V oil and gas facilities for 2010. It also includes analyses of GHG data from electric generating facilities that reported carbon dioxide (CO_2) emissions from 2000 – 2009 to the United States Environmental Protection Agency (USEPA) Clean Air Markets Division (CAMD) program. This document provides a snapshot of the individual and collective contributions of these facilities to the GHG emissions of their industry sector and the overall inventory. Trends over time may reflect the influence of emission reduction strategies and general economic activity. This paper will be updated when additional GHG emissions data from later years are reviewed and analyzed, which we anticipate to be done annually. The CAMD data are updated annually; their inclusion in this report is intended to document previous analyses of the electric sector's GHG emissions by fossil fuel type.

This report does not include emissions from transportation (e.g. trucks and cars), household, commercial buildings or agricultural production sources of GHG emissions. NMED's most recent top-down GHG emissions inventory was published March 15, 2010 and includes emissions from these and other source types. The GHG emissions included in this report have been compiled and reviewed by NMED. However, the data contained in this report should be considered a work in progress, the quality of which should improve each year as a result of NMED's review and the increased understanding of the reporting methods and procedures by the facilities subject to GHG emissions reporting.

The GHG emissions inventory data through 2009 contained in this document reflect only what has been reported pursuant to 20.2.73.300 New Mexico Administrative Code (NMAC) – Notice of Intent and Emissions Inventory Requirements. This rule requires that all facilities subject to Title V of the Clean Air Act,[1] excluding those located in Bernalillo County or on Tribal land,[2] report carbon dioxide emissions starting in emissions year 2008. GHG emissions are reported the following year (i.e., emissions during 2008 are reported in 2009). For emissions years 2009 and 2010, Title V sources were also required to report methane (CH_4) emissions. For emissions year 2010, non-Title V minor oil and gas sources were required to report CO_2 and CH_4 emissions. Emissions year 2010 also marked the first time that GHG emissions had to be reported from sources emitting 25,000 or more metric tons to the USEPA under 40 Code of Federal Regulations (CFR) Part 98. This is significant as 63 and 87 facilities (in 2008 and 2009 respectively) in New Mexico emitted more than 25,000 metric tons of GHG. The combined emissions from Title V facilities emitting more than 25,000 metric tons constitute greater than 95% of the total emissions reported for each of these years.

The 2008 CO_2 emissions were reported primarily from stationary combustion sources, but some natural gas processing plants also reported vented emissions. NMED's primary focus for 2008

[1] Facilities subject to Title V of the Clean Air Act include facilities with a potential to emit 100 tons per year or more of a regulated pollutant, 10 tons per year of any one hazardous air pollutant or 25 tons per year of combined hazardous air pollutants.

[2] NMED's AQB does not have regulatory jurisdiction in Bernalillo County or on tribal lands.

was to introduce reporting of GHG emissions to source owner/operators, as New Mexico was one of the first states to require GHG emissions reporting. The 2008 and 2009 GHG reporting requirements relied heavily on the emission quantification methods and procedures developed by the California Air Resources Board and the American Petroleum Institute's Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry (API Compendium). NMED's 2010 GHG reporting procedures used USEPA's quantification methods found in 40 CFR Part 98.

Future NMED GHG emissions reporting procedures will rely heavily upon USEPA requirements; many of our Title V facilities are subject to USEPA reporting, and using the same emission calculation methodologies as USEPA should ensure consistent GHG emissions reporting. For those sources not subject to USEPA GHG reporting, reporting GHG emissions to New Mexico using USEPA methods will allow those facilities to comply with Part 73 and demonstrate non-applicability of USEPA's rule. Use the following link for additional information on New Mexico's GHG reporting procedures:

http://www.nmenv.state.nm.us/aqb/GHG/ghgrr_index.html

The primary source of GHG emissions in New Mexico is the combustion of fossil fuels. Typically, coal and natural gas are used to generate electricity. Natural gas is also the primary fuel used to fire heaters, boilers and reciprocating engines for fossil fuel production or industrial processes. The combustion of fossil fuels produces CO_2, CH_4, and nitrous oxide (N_2O) all of which are GHG. Stationary combustion CO_2 emissions are either directly measured using a continuous emissions monitor (required for large electric generating facilities) or estimated using an emissions calculation methodology with emission factors. The following emissions calculation[3] is used to determine the amount of CO_2 produced by burning natural gas:

CO_2 Emissions (metric tons/Yr) = Fuel (MMSCF/Yr) × Fuel Heating Value (MMBtu/scf) × Fuel Emission Factor (Kg CO_2/MMBtu × 0.001 (metric tons/Kg)

A 1,000 horsepower natural gas fired compressor engine burns approximately 74.6 million standard cubic feet year of natural gas having an assumed heating value of 1000 British thermal units per standard cubic foot. The USEPA CO_2 emission factor for natural gas is 53.02 kilograms per million British thermal units. Therefore, the calculated emission rate for this compressor engine is as follows:

74.6 MMSCF/Yr × 1000 Btu/scf × 53.02 Kg/metric ton × 0.001 = 3,955.3 metric tons CO_2/Yr

The same formula using different emission factors for CH_4 and N_2O is used to calculate emissions of those GHG. Version 1.0 of this report does not include N_2O emissions. Emission factors are also available for other fuels (e.g., coal or fuel oil) The Carbon Dioxide Equivalent (CO_2e) emitted from the combustion of fossil fuels of CH_4 and N_2O are orders of magnitude less than the CO_2 emitted.

[3] Abbreviations used in the following formulas are: Btu = British thermal unit, Kg = kilogram, MMBtu = million British thermal units, MMSCF = million standard cubic feet, scf = standard cubic foot, Yr = year.

In addition to CO_2 and CH_4 emissions from stationary combustion, some facilities in the oil and gas industry emit significant quantities of one or both of these pollutants as vented or fugitive (e.g., equipment leak) emissions. Coal bed methane natural gas processing plants vent to the atmosphere large amounts of CO_2 removed from methane gas using an amine unit. Compressor stations may also vent or leak CO_2 and CH_4 from glycol dehydrators, pneumatic devices, compressor venting, pipes, valves, flanges and equipment seals. The API Compendium further elaborates upon the sources of GHG emissions from this sector. API's most current Compendium can be found at the following link:

http://www.api.org/environment-health-and-safety/climate-change/whats-new/compendium-ghg-methodologies-oil-and-gas-industry.aspx

All minor oil and gas sources were required to report their 2010 CO_2 and CH_4 emissions pursuant to 20.2.73.300 NMAC. NMED developed an Excel Spreadsheet Calculator that facilitated the reporting of these emissions. The spreadsheet included data input fields and emission calculation methods to determine combustion, vented and fugitive GHG emissions. NMED received 54 emission reports covering over 900 permitted (i.e., Notice of Intent or construction permits) facilities. The results (see chart 8) indicate that vented and fugitive CH_4 emissions are significant contributors to the overall oil and gas GHG emissions profile. It should be noted that facility owners were not required to and did not report GHG emissions from well drilling and well completion activities, for which an air quality permit or Notice of Intent is generally not required.

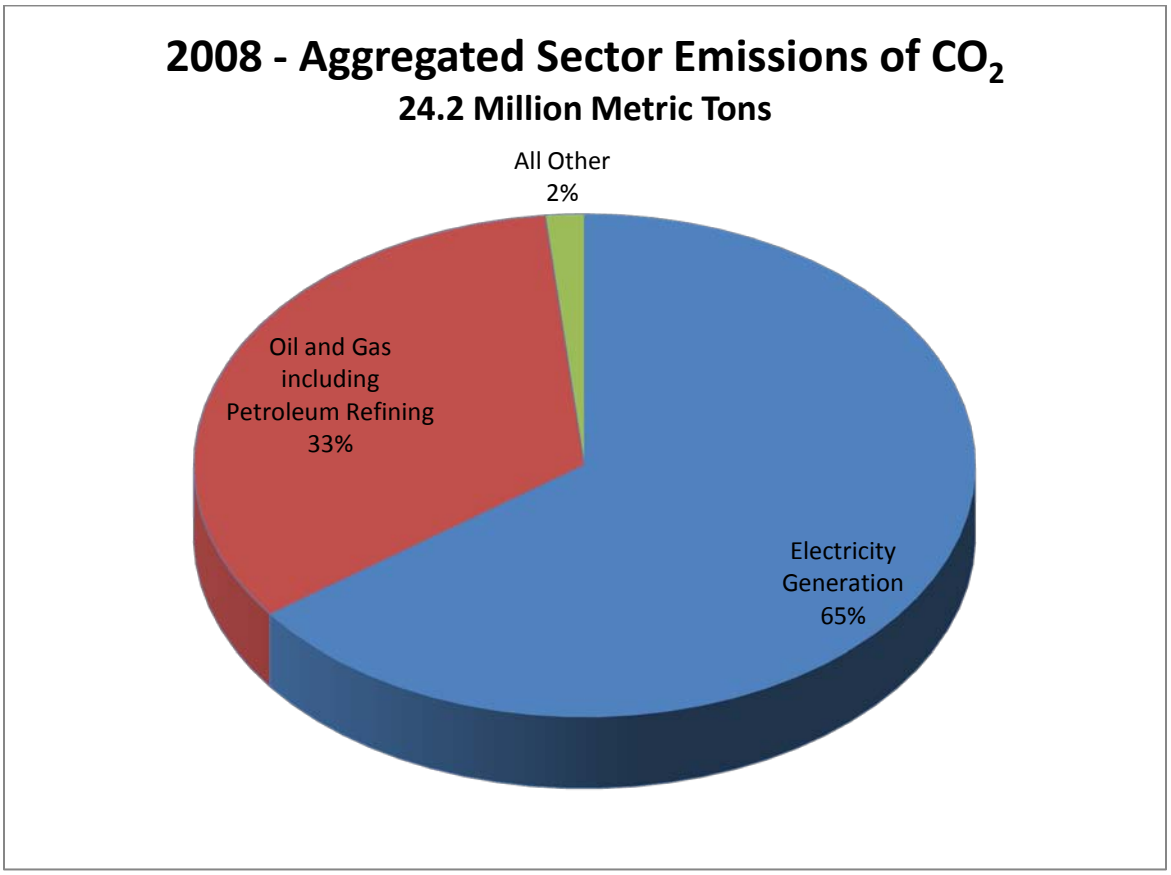
Title V GHG emissions data are required to be reported to New Mexico by April 1st of each year, if the facility is not subject to USEPA reporting pursuant to 40 CFR Part 98; facilities subject to USEPA reporting are required to report by the deadline in 40 CFR Part 98. Eventually, most, if not all, sources required to report to USEPA will be subject to a March 31st deadline each year. NMED receives GHG emissions data from facility owners using the Air Emissions Inventory Reporting (AEIR) tool. Facility owners reporting to USEPA do so by using USEPA's electronic Greenhouse Gas Reporting Tool (eGGRT). NMED reviews the GHG emissions data and supporting calculations submitted through AEIR and NMED analyzes the emissions data we receive from USEPA. In some instances, facilities report a portion of their GHG emissions to USEPA (e.g., combustion emissions) and submit other GHG emissions (e.g., vented and fugitive emissions) to NMED as those emissions may not be subject to USEPA's GHG reporting rule.

GHG differ in their Global Warming Potential (GWP), which depends on their atmospheric residence time and their capacity to trap heat. GWP values for different gases are expressed relative to carbon dioxide, which is considered the reference gas and assigned a GWP of one. The GWP (over a 100-year time horizon) of a given mass of CH_4 is 21 times that of the same mass of CO_2. A given mass of N_2O has a GWP 310 times that of the same mass of CO_2. Therefore, the emissions of different GHG can be expressed on a common basis (called carbon dioxide equivalent or CO_2e) by multiplying the mass of emissions of each GHG by its GWP. Unless noted otherwise, the charts and tables included in this report have converted CH_4 and N_2O emissions into CO_2e. This is relevant to New Mexico's data for 2009 and later, which includes CH_4 emissions.

Charts 1 – 8 include summary and analysis of GHG emissions data received by NMED starting with emissions year 2008. In some instances the charts include explanatory information. Charts 9 and 10 were developed by NMED as a result of analyzing CO_2 emissions data reported to USEPA's CAMD. This document also includes individual source data for each facility that reported GHG emissions to NMED in either 2008 or 2009. Questions related to the charts and data contained in them should be directed to Michael Schneider, GHG Emissions Inventory Specialist in NMED's Air Quality Bureau. Mr. Schneider can be contacted at (505) 476-4323 or mike.schneider@state.nm.us.

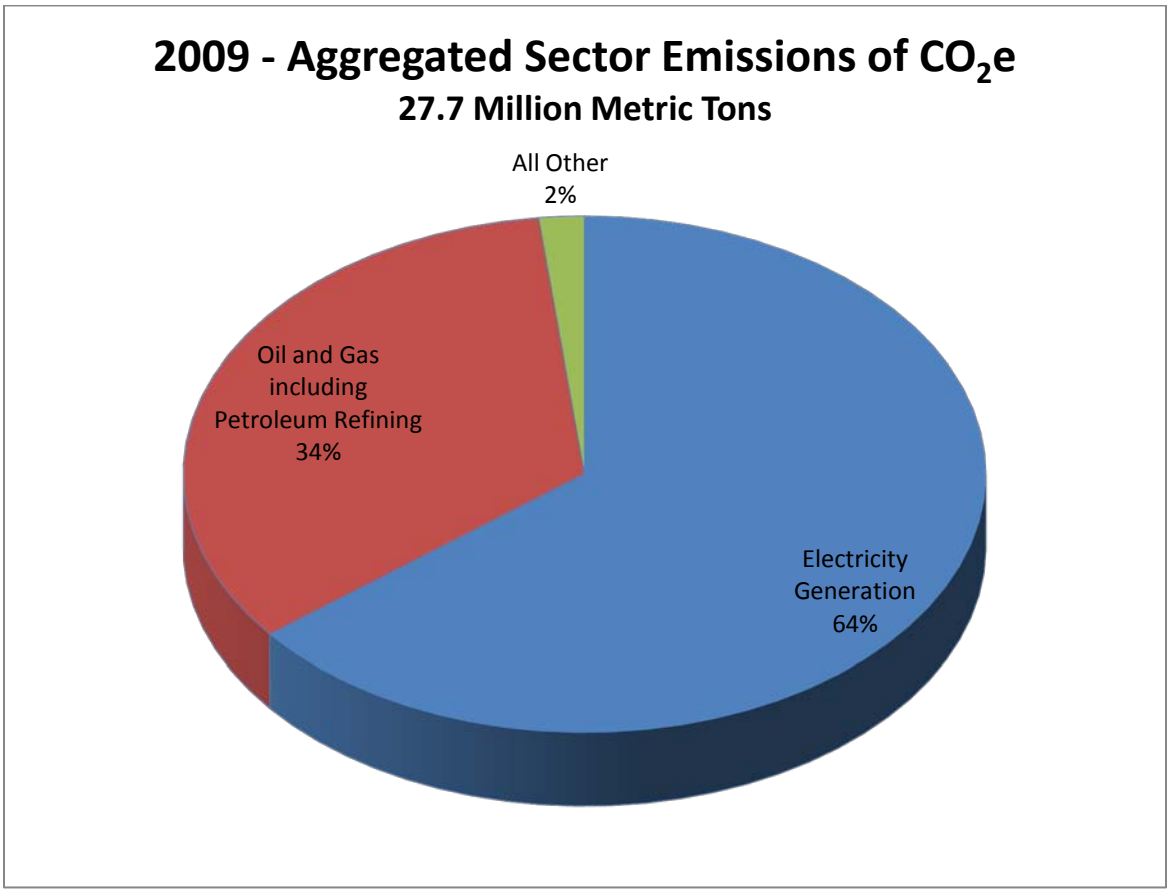
(Chart 1)

Chart 1 represents the 2008 aggregated sector emissions of CO_2 from Title V facilities. The electricity generation sector emits the most CO_2 because of the coal and natural gas that is combusted to generate electricity. The oil and gas sector also emits a significant portion of CO_2 because fossil fuel combustion is required to process and transport petroleum and natural gas related products. However, these data do not include oil and gas well-related emissions. The "all other" category consists of facilities that have industrial heaters, dryers or boilers used for industrial processes or facility utilities.



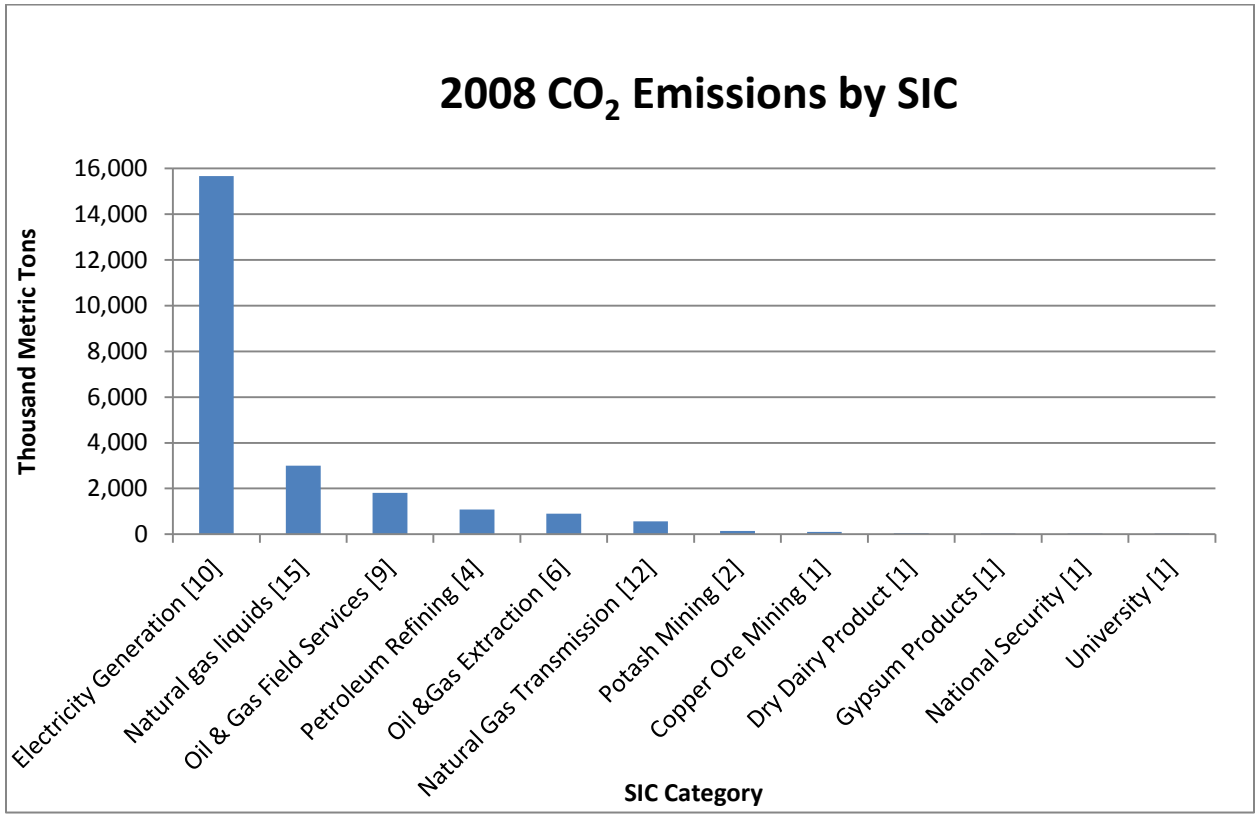
(Chart 2)

Chart 2 represents the 2009 aggregated sector emissions in CO_2e from Title V facilities. As in 2008, the electric sector emits the most CO_2 because of the coal and natural gas that's combusted to generate electricity. The Oil and Gas sector also emits a significant portion of CO_2 because fossil fuel combustion is required to process and transport petroleum and natural gas related products and CH_4 is emitted from vented and fugitive sources. However, these data do not include oil and gas well-related emissions. The "all other" category consists of facilities that have heaters, dryers or boilers used for industrial processes or facility utilities.



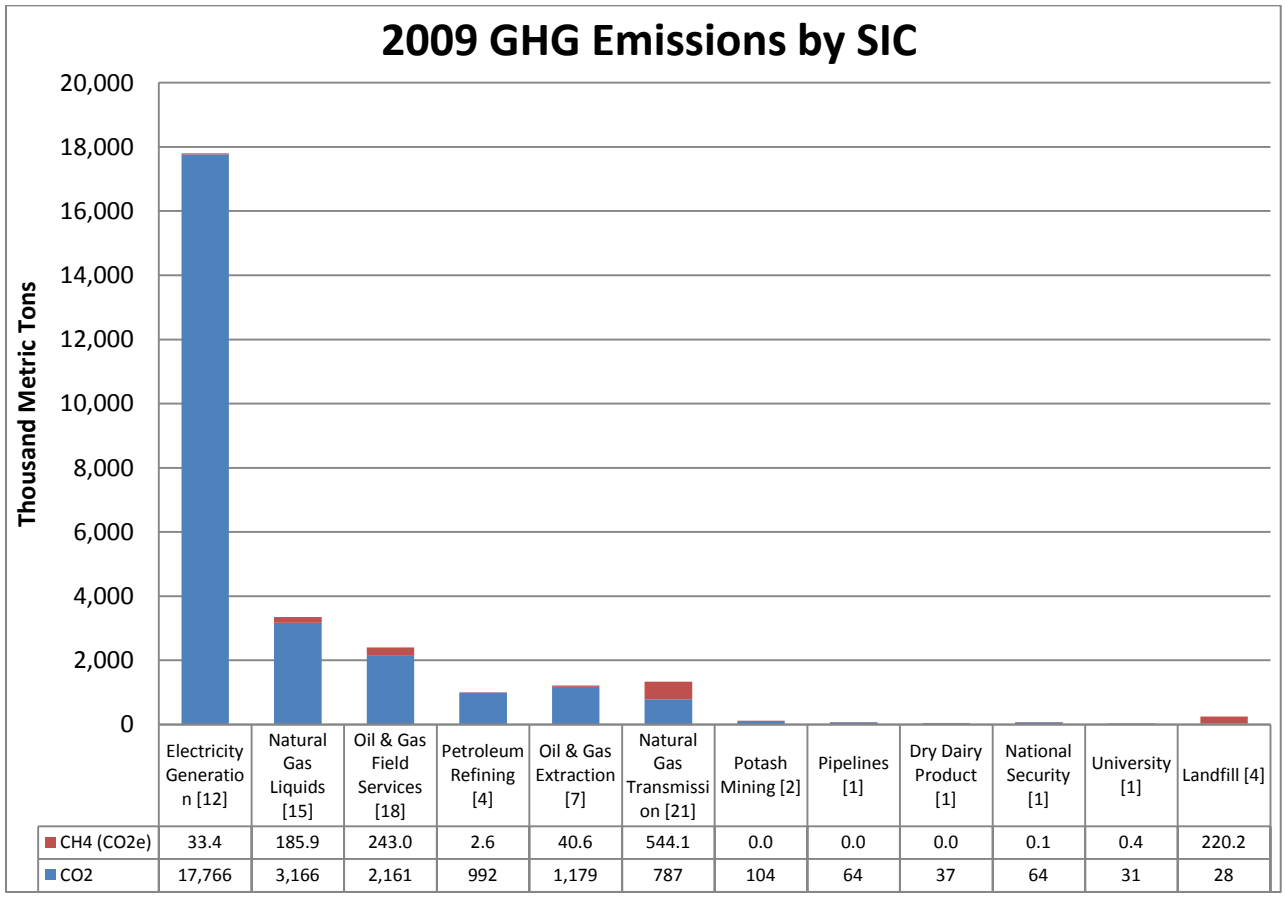
(Chart 3)

Chart 3 represents CO_2 emissions by Standard Industrial Classification ("SIC") category and the number of facilities per category with emissions greater than 25,000 metric tons for the 2008 Title V GHG Emissions Inventory. CO_2 emissions are from combustion only, except for some natural gas processing plants that also reported vented CO_2 emissions. The numbers after each category on the x axis represent the number of each type of facility that reported GHG emissions to NMED.



(Chart 4)

Chart 4 represents the CO_2 and CH_4 emissions (expressed as CO_2e) by Standard Industrial Classification (SIC) and the number of sources per category with emissions greater than 25,000 metric tons for the 2009 Title V GHG Emissions Inventory.



	Electricity Generation [12]	Natural Gas Liquids [15]	Oil & Gas Field Services [18]	Petroleum Refining [4]	Oil & Gas Extraction [7]	Natural Gas Transmission [21]	Potash Mining [2]	Pipelines [1]	Dry Dairy Product [1]	National Security [1]	University [1]	Landfill [4]
CH4 (CO2e)	33.4	185.9	243.0	2.6	40.6	544.1	0.0	0.0	0.0	0.1	0.4	220.2
CO2	17,766	3,166	2,161	992	1,179	787	104	64	37	64	31	28

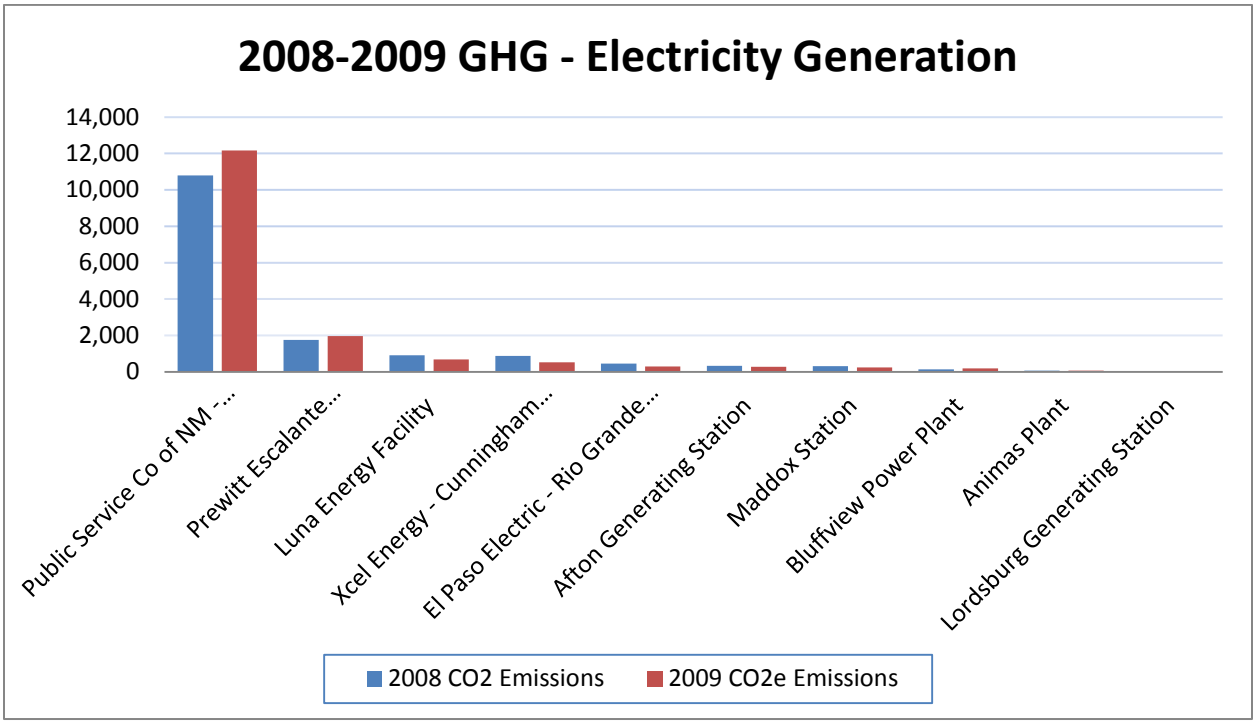
(Chart 5)

Chart 5 shows TV GHG emissions by SIC category for 2008-2009.

Greenhouse Gas Emissions by Standard Industrial Classification 2008-2009(Thousand Metric Tons)					
			Total 2009 CO2 Emissions		
Standard Industrial Classification	**SIC code**	**Total 2008 CO_2 Emissions**	**CO_2**	**CH_4 (CO_2e)**	**Total (CO_2e)**
Electricity Generation	4911	15,696	17,766	33.4	17,799.3
Natural Gas Liquids	1321	3,048	3,166	185.9	3,352.1
Oil & Gas Field Services	1389	2,100	2,161	243.0	2,404.2
Petroleum Refining	2911	1,086	992	2.6	994.9
Oil & Gas Extraction	1311	1,001	1,179	40.6	1,219.7
Natural Gas Transmission	4922	818	787	544.1	1,331.5
Potash Mining	1474	150	104	0.0	104.3
Copper Mining	1021	88	0	0.0	0.0
Pipelines	4619	63	64	0.0	64.4
Dry Dairy Product	2023	51	37	0.0	37.3
National Security	9711	37	64	0.1	64.4
Gypsum Products	3275	32	18	0.0	18.5
University	8221	27	31	0.4	31.8
Landfill	4953	6	28	220.2	248.4
Petroleum Pipelines Refined	4613	3	4	0.0	4.2
Plastic Foam Products	3086	1	0	0.0	0.4
Total		**24,206**			**27,675**

(Chart 6)

Chart 6 compares 2008 and 2009 stationary combustion emissions from the electricity generating sector for facilities having emissions greater than 25,000 metric tons. Although 2009 emissions include CO_2e (i.e. CH_4 in addition to CO_2), the relative contribution of CH_4 from combustion is insignificant and not a contributor to differences in emissions from any source or the category as a whole when comparing 2008 to 2009.



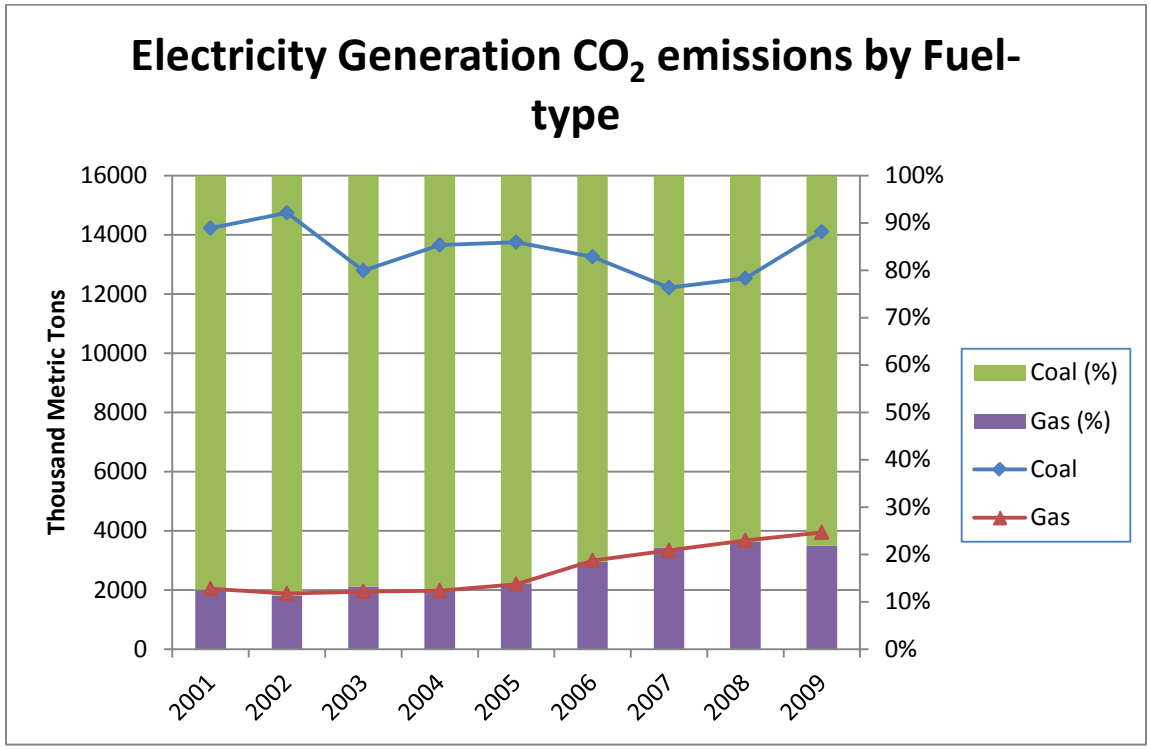
(Chart 7)

Chart 7 compares the GHG emissions from the electric sector for 2008 and 2009. It should be noted that two additional sources reported GHG emissions in 2009.

Company/ Facility	2008 CO_2 Emissions (Thousand Metric Tons)	2009 CO_2e Emissions (Thousand Metric Tons)
Public Service Co of NM - San Juan Generating Stn.	10,797.5	12,167.1
Prewitt Escalante Generating Station	1,755.1	1,969.3
Luna Energy Facility	905.8	680.6
Xcel Energy - Cunningham Station	881.4	531.5
El Paso Electric - Rio Grande Generating Station	461.7	297.3
Afton Generating Station	329.2	285.3
Maddox Station	310.0	239.5
Bluffview Power Plant	135.7	189.4
Animas Plant	63.1	70.9
Lordsburg Generating Station	29.9	27.0
Pyramid Generating Station	22.1	14.9
Public Service Co of NM - Las Vegas Generating Stn.	4.5	0.0
Valencia Energy Facility	0.0	26.4
Hobbs Generating Station	0.0	1,300.1
Total	**15,696.1**	**17,799.3**

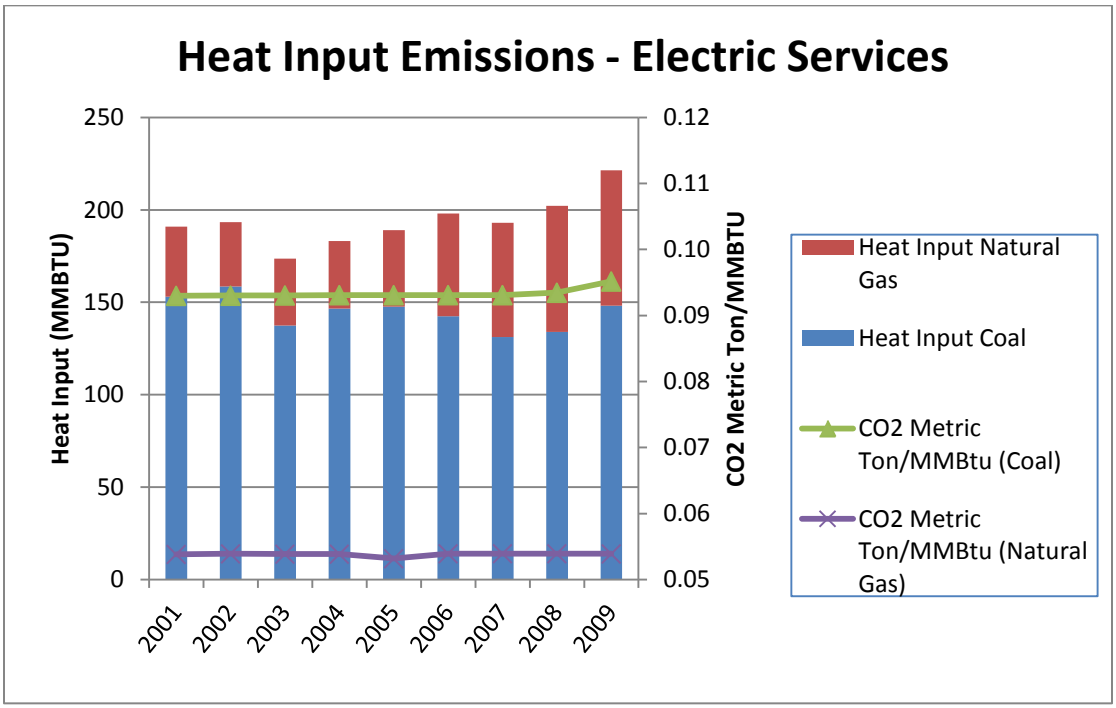
(Chart 8)

Chart 8 compares New Mexico electric sector GHG emissions based on fuel type in percent and thousand metric tons from 2001 through 2009. The data used to develop this chart is derived from USEPA's Clean Air Markets Division, but does not include electricity generation in Bernalillo County or Tribal land, which are not included in NMED's reporting data. The chart reflects increasing use of natural gas as a fuel to generate electricity.



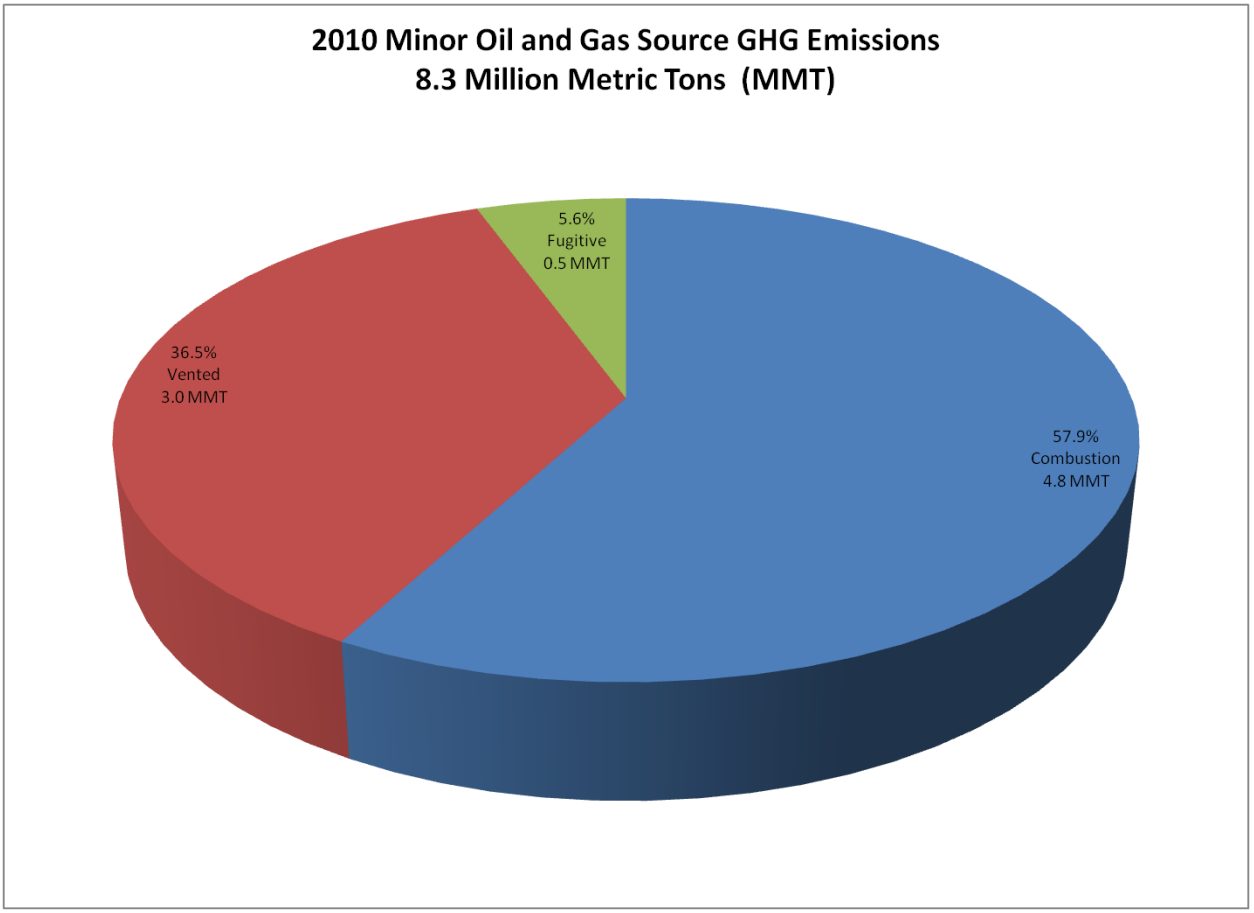
(Chart 9)

Chart 9 shows the carbon intensity per unit of energy for coal in generating electricity is approximately 1.8 times that of natural gas for New Mexico facilities (excluding those on Tribal Lands and Bernalillo County) that reported CO_2 emissions to USEPA's Clean Air Markets Division from 2001 -2009.



(Chart 10)

Chart 10 shows the relative contribution of combustion, vented and fugitive GHG emissions to the 2010 total GHG emissions from the New Mexico non-Title V oil and gas sources. The chart does not include well-related GHG emissions. The majority of these sources are located either in the San Juan Basin or the Permian Basin.



New Mexico 2008 Title V GHG Emissions Inventory

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Thousand Metric Tons)
City of Rio Rancho	Rio Rancho Sanitary Landfill	1128	4953	4.0
Waste Connection	Camino Real Landfill	167	4953	1.5
Public Service Company of New Mexico	San Juan Generating Stn.	1421	4911	10,797.5
	Luna Energy Facility	878	4911	905.8
	Afton Generating Station	164	4911	329.2
	Lordsburg Generating Station	560	4911	29.9
	Las Vegas Station	1446	4911	4.5
Tri-State Generating	Prewitt Escalante Generating Station	911	4911	1,755.1
	Pyramid Generating Station	558	4911	22.1
Excel Energy	Cunningham Station	604	4911	881.4
	Maddox Station	588	4911	310.0
El Paso Electric	Rio Grande Generating Station	122	4911	461.7
City of Farmington	Bluffview Power Plant	3535	4911	135.7
	Animas Plant	1159	4911	63.1
Val Verde Gas Gathering Company, LP	Val Verde Treater	1182	1321	1,340.2
	Pump Canyon Compressor Station	1183	4922	41.7
	Frances Mesa Compressor Station	1038	1389	30.5
	Gobernador/Manzanares Compressor Station	989	4922	44.9
	Buena Vista Compressor Station	1315	4922	13.4
	Middle Mesa Compressor Station	1193	4922	10.9
	Hart Canyon Compressor Station	1181	4922	11.2
	Arch Rock Compressor Station	1289	4922	8.9
Conoco Phillips	San Juan Gas Plant	1177	1321	244.1
	East Vacuum Liquid Recovery	638	1311	65.4
	Wingate Fractionation Plant	884	1321	36.8
	MCA Tank Battery No2	624	1311	11.1
DCP Midstream	Artesia Gas Plant	199	1321	66.1
	Eunice Gas Plant	595	1321	146.1
	Linam Ranch Gas Plant	589	1321	164.2
	Pecos Diamond Gas Plant	227	1321	9.2
	Antelope Ridge Gas Plant	621	1321	16.4
	Golfcourse Booster Station	592	1311	21.1
	Monument Booster Station	593	1311	20.6
	Lusk Plant	599	1311	2.9
	South Hat Mesa Booster Station	665	4922	16.1
	Oil Center Compressor Station	668	4922	13.2
	Quail Booster Station	679	1311	14.3
Williams Four Corners	Milagro Cogeneration and Gas Plant	1277	1389	1,500.5
	Kutz Gas Plant	1158	1321	141.2

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Thousand Metric Tons)
	El Cedro Gas Plant	1002	1311	100.5
	La Jara Compressor Station	1010	1389	82.2
	Lybrook Gas Plant	979	4922	58.6
	Dogie Canyon Compressor Station	990	4922	42.5
	32-8 No2 CDP Compressor Station	1236	1389	40.9
	32-7 CDP Compressor Station	1221	1389	40.3
	Trunk L Compressor Station	1037	1389	37.2
	Laguna Seca Compressor Station	1011	1389	29.8
	Chaco Compressor Station	1189	1389	26.3
	Middle Mesa CDP Compressor Station	1272	1389	27.8
	30-5 CDP Compressor Stn.	998	1389	23.8
	32-8 No3 CDP Compressor Station	1168	1389	17.0
	29-6 CDP No2 Compressor Station	1007	1389	21.3
	29-6 No4 CDP Compressor Station	1013	1389	13.2
	32-9 Central Delivery Point (CDP)	1226	1389	12.5
	Carracas CDP Compressor Station	1009	1389	11.2
	Lateral N30 Compressor Station	1347	1389	11.2
	31-6 CDP Compressor Station	1006	1389	8.8
	Trunk N Compressor Station	1303	1389	22.4
	Trunk B Compressor Station	1350	1389	15.4
	Rosa No1 Compressor Station	1367	1389	15.0
	Aztec CDP Compressor Station No1327	1276	1389	7.3
	Cedar Hill Central Delivery Point	1227	1389	25.7
	Horse Canyon Central Delivery Point	1274	1389	14.5
	Pump Mesa Compressor Station	1273	1389	19.4
	Thompson Compressor Station	1191	1389	19.8
	Sims Mesa Compressor Station	1040	1389	4.0
	North Crandall Compressor Station	1374	1389	7.4
	Trunk A Booster Compressor Station	1342	1389	14.5
Transwestern Pipeline Company	Roswell Compressor Station No9	10	4922	1.0
	Corona Compressor Station	849	4922	0.9
	Atoka No3 Compressor Station	205	4922	8.3
	Thoreau No5 Compressor Station	890	4922	1.8
	Bloomfield Compressor Station	1192	4922	22.8
	Mountainair No7 Compressor Station	1569	4922	0.6
Navajo Refining	Navajo Refining - Artesia Refinery	198	2911	624.2
	Lovington Refinery	622	2911	93.8
Western Refining	Ciniza Refinery	888	2911	264.5
	Bloomfield Refinery	1156	2911	103.5
Versado Gas Processors, LLC	Targa - Eunice Gas Plant	609	1321	187.8
	Monument Gas Plant	610	1321	96.4

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Thousand Metric Tons)
	Saunders Gas Plant	612	1321	67.0
	North Eunice Compressor Station	602	1311	42.5
	Targa - Vada Compressor Station	613	1311	18.0
	Buckeye Compressor Station	605	1311	4.4
OXY USA WTP Limited Partnership	Indian Basin Gas Plant	197	1321	111.3
El Paso Natural Gas	Lordsburg Compressor Station	553	4922	61.3
	Florida Compressor Station	868	4922	45.8
	Eunice Compressor Station A	566	4922	41.5
	Monument Compressor Station	571	4922	38.6
	Afton Compressor Station	123	4922	35.0
	Pecos River Compressor Station	194	4922	81.1
	Blanco Compressor Station A	1147	4922	24.4
	Belen Compressor Station	1590	4922	11.2
	Caprock Compressor Station	572	4922	6.0
	Deming Compressor Station	867	4922	7.4
	Washington Ranch	220	4922	8.8
	Roswell Compressor Station	6	4922	1.5
	Lincoln Compressor Station	843	4922	0.9
	Bluewater Compressor Station	882	4922	4.1
	Eunice B&C Compressor Station	669	4922	14.7
Mid America Pipeline	Huerfano Pump Station	1201	4619	23.9
	San Ysidro Pump Station	1114	4619	23.4
	San Luis Pump Station	1109	4619	16.0
Enterprise Field Services LLC	Chaco Gas Plant	1148	1311	395.3
	Blanco Compressor C and D Station	3552	1311	263.5
	Rattlesnake Canyon Compressor Station	1423	4922	47.0
	South Carlsbad Compressor Station	218	4922	32.9
	Cedar Hill Compressor Station	1331	4922	6.5
Davis Gas Processing	Denton Gas Plant	568	1321	64.3
Souther Union Gas Limited	Jal No3 Gas Plant	569	1321	226.8
	West Eunice Compressor Station	755	1311	17.3
Frontier Field Services LLC	Empire Abo Gas Plant	191	1321	40.6
	Maljamar Gas Plant	565	1321	22.1
Agave Energy Company	Red Bluff No3 Compressor Station	19	4922	9.1
	Bitter Lake Compressor Station	14	4922	11.9
	Southern Union Compressor Station	24315	4922	7.9
	Agave Dagger Draw Gas Plant	211	1321	5.4
Yates Petroleum	Penasco Compressor Station	262	4922	3.9
Foamex	Santa Teresa Plant	133	3086	1.0
NuStar Logistics Operation LP	Hope Pump Station	52	4613	2.7

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Thousand Metric Tons)
New Mexico Gas Company	Espejo Compressor Station	1110	4922	4.1
	PNM - Star Lake Compressor Station	905	4922	8.9
Black Hills Midstream LLC	Espinosa Canyon Amine Plant	21709	1311	24.2
Natural Gas Pipeline Company	Compressor Station No167	667	4922	6.6
Western Gas Resources	San Juan River Gas Plant	1252	1321	62.1
Intrepid Potash New Mexico LLC	East KCl Compaction	208	1474	106.6
Mosaic Potash Carlsbad Inc	Mosaic Potash Carlsbad Inc	196	1474	43.6
Freeport-McMoRan Chino Mines Co	Chino Mine - Hurley Facility	526	1021	87.8
	Tyrone Mine	527	1021	0.1
DairiConcenpts LLC	Portales	1094	2023	50.7
American Gypsum	Bernalillo (Wallboard) Plant	1104	3275	32.1
State of New Mexico	New Mexico State University Campus	144	8221	26.8
US Department of Energy	Los Alamos National Laboratory	856	9711	31.2
US Department of Defense	White Sands Missile Range	141	9711	2.3
	Holloman Air Force Base	942	9711	3.4
Total CO_2 emissions (Thousand Metric Tons)				***24,206.1***

[1] NMED Facility Identification Number

[2] Standard Industrial Classification Code

New Mexico 2009 Title V GHG Emissions Inventory

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Metric Tons)	CH_4 Emissions (Metric Tons)	CO_2e Emissions (Thousand Metric Tons)
Northeast New Mexico Regional Landfill	Northeastern New Mexico Regional Landfill	930	4953	847	309	7.3
Otero/Lincoln (County of)	Solid Waste Landfill	955	4953	4	971	20.4
City of Clovis	Clovis Regional Solid Waste Facility Landfill	111	4953	5,036	1,836	43.6
Santa Fe County	Caja Del Rio Landfill	1484	4953	11	2,036	42.8
City of Carlsbad	Sand Point Landfill	511	4953	1,915	698	16.6
Sandoval County	Landfill	3752	4953	1,071	391	9.3
Valencia County	Landfill	21664	4953	1,166	425	10.1
San Juan County	Regional Landfill	4544	4953	6,048	2,204	52.3
City of Rio Rancho	Rio Rancho Sanitary Landfill	1128	4953	9,937	1,618	43.9
Waste Connection	Camino Real Landfill	167	4953	2,162	0	2.2
Public Service Company of New Mexico	San Juan Generating Stn.	1421	4911	12,140,276	1,276	12,167.1
	Luna Energy Facility	878	4911	680,337	11	680.6
	Afton Generating Station	164	4911	285,162	5	285.3
	Lordsburg Generating Station	560	4911	27,023	0	27.0
Tri-State Generating	Prewitt Escalante Generating Station	911	4911	1,963,983	253	1,969.3
	Pyramid Generating Station	558	4911	14,875	0	14.9
Excel Energy	Cunningham Station	604	4911	531,293	10	531.5
	Maddox Station	588	4911	239,450	4	239.5
El Paso Electric	Rio Grande Generating Station	122	4911	297,241	5	297.3
City of Farmington	Bluffview Power Plant	3535	4911	189,337	3	189.4
	Animas Plant	1159	4911	70,865	1	70.9
Valencia Power LLC	Valencia Energy Facility	1611	4911	26,384	0	26.4
Lea Power Partners LLC	Hobbs Generating Station	25726	4911	1,299,637	22	1,300.1
Val Verde Gas Gathering Company, LP	Val Verde Treater	1182	1321	1,249,326	4	1,249.4
	Pump Canyon Compressor Station	1183	4922	34,454	16	34.8
	Frances Mesa Compressor Station	1038	1389	21,034	846	38.8
	Gobernador/Manzanares Compressor Station	989	4922	33,981	818	51.2
	Buena Vista Compressor Station	1315	4922	11,185	360	18.7
	Middle Mesa Compressor Station	1193	4922	18,177	458	27.8
	Hart Canyon Compressor Station	1181	4922	19,352	633	32.6
	Arch Rock Compressor Station	1289	4922	7,062	89	8.9
Conoco Phillips	San Juan Gas Plant	1177	1321	249,087	15	249.4
	East Vacuum Liquid Recovery	638	1311	44,621	1	44.7
	Wingate Fractionation Plant	884	1321	93,595	4	93.7

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Metric Tons)	CH_4 Emissions (Metric Tons)	CO_2e Emissions (Thousand Metric Tons)
	MCA Tank Battery No2	624	1311	12,670	615	25.6
DCP Midstream	Artesia Gas Plant	199	1321	61,472	541	72.8
	Eunice Gas Plant	595	1321	169,459	931	189.0
	Linam Ranch Gas Plant	589	1321	213,840	1,751	250.6
	Pecos Diamond Gas Plant	227	1321	10,839	244	16.0
	Antelope Ridge Gas Plant	621	1321	10,436	151	13.6
	Golfcourse Booster Station	592	1311	14,306	336	21.4
	Monument Booster Station	593	1311	15,312	232	20.2
	Lusk Plant	599	1311	13,702	83	15.4
	South Hat Mesa Booster Station	665	4922	18,828	280	24.7
	Oil Center Compressor Station	668	4922	8,810	262	14.3
	Quail Booster Station	679	1311	14,232	179	18.0
Williams Four Corners	Milagro Cogeneration and Gas Plant	1277	1389	1,506,123	537	1,517.4
	Kutz Gas Plant	1158	1321	181,178	129	183.9
	El Cedro Gas Plant	1002	1311	207,344	40	208.2
	La Jara Compressor Station	1010	1389	58,695	38	59.5
	Lybrook Gas Plant	979	4922	110,637	11	110.9
	Dogie Canyon Compressor Station	990	4922	42,060	34	42.8
	32-8 No2 CDP Compressor Station	1236	1389	44,225	860	62.3
	32-7 CDP Compressor Station	1221	1389	50,537	780	66.9
	Trunk L Compressor Station	1037	1389	47,960	908	67.0
	Laguna Seca Compressor Station	1011	1389	36,425	263	41.9
	Chaco Compressor Station	1189	1389	40,313	50	41.4
	Middle Mesa CDP Compressor Station	1272	1389	37,059	395	45.4
	30-5 CDP Compressor Stn.	998	1389	29,879	186	33.8
	32-8 No3 CDP Compressor Station	1168	1389	18,262	471	28.2
	29-6 CDP No2 Compressor Station	1007	1389	23,360	422	32.2
	29-6 No4 CDP Compressor Station	1013	1389	15,296	162	18.7
	32-9 Central Delivery Point (CDP)	1226	1389	16,531	459	26.2
	Carracas CDP Compressor Station	1009	1389	21,308	634	34.6
	Lateral N30 Compressor Station	1347	1389	14,020	277	19.8
	31-6 CDP Compressor Station	1006	1389	14,230	1,492	45.6
	Trunk N Compressor Station	1303	1389	17,516	44	18.4
	Trunk B Compressor Station	1350	1389	16,726	0	16.7
	Rosa No1 Compressor Station	1367	1389	19,185	616	32.1
	Aztec CDP Compressor Station No1327	1276	1389	11,320	306	17.8
	Cedar Hill Central Delivery Point	1227	1389	8,829	488	19.1

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Metric Tons)	CH_4 Emissions (Metric Tons)	CO_2e Emissions (Thousand Metric Tons)
	Horse Canyon Central Delivery Point	1274	1389	14,085	395	22.4
	Pump Mesa Compressor Station	1273	1389	22,144	695	36.7
	Thompson Compressor Station	1191	1389	24,445	43	25.3
	Sims Mesa Compressor Station	1040	1389	5,893	150	9.0
	North Crandall Compressor Station	1374	1389	8,756	19	9.2
	Trunk A Booster Compressor Station	1342	1389	17,013	36	17.8
Transwestern Pipeline Company	Roswell Compressor Station No9	10	4922	0	79	1.7
	Corona Compressor Station	849	4922	1,125	162	4.5
	Atoka No3 Compressor Station	205	4922	7,681	314	14.3
	Thoreau No5 Compressor Station	890	4922	275	100	2.4
	Bloomfield Compressor Station	1192	4922	64,092	1,786	101.6
	Mountainair No7 Compressor Station	1569	4922	2,137	1	2.2
Navajo Refining	Navajo Refining - Artesia Refinery	198	2911	565,545	39	566.4
	Lovington Refinery	622	2911	108,099	17	108.5
Western Refining	Ciniza Refinery	888	2911	232,306	60	233.6
	Bloomfield Refinery	1156	2911	86,416	6	86.5
Versado Gas Processors, LLC	Targa - Eunice Gas Plant	609	1321	182,344	1,552	214.9
	Monument Gas Plant	610	1321	250,986	624	264.1
	Saunders Gas Plant	612	1321	85,757	654	99.5
	North Eunice Compressor Station	602	1311	45,750	199	49.9
	Targa - Vada Compressor Station	613	1311	15,240	117	17.7
	Buckeye Compressor Station	605	1311	42,023	116	44.5
OXY USA WTP Limited Partnership	Indian Basin Gas Plant	197	1321	83,246	781	99.6
El Paso Natural Gas	Lordsburg Compressor Station	553	4922	31,095	1,028	52.7
	Florida Compressor Station	868	4922	28,254	1,368	57.0
	Monument Compressor Station	571	4922	21,443	1,433	51.5
	Afton Compressor Station	123	4922	18,719	815	35.8
	Pecos River Compressor Station	194	4922	57,206	543	68.6
	Blanco Compressor Station A	1147	4922	25,532	3,122	91.1
	Belen Compressor Station	1590	4922	9,206	828	26.6
	Caprock Compressor Station	572	4922	4,052	605	16.7
	Deming Compressor Station	867	4922	81	5,313	111.7
	Washington Ranch	220	4922	16,061	1,049	38.1
	Roswell Compressor Station	6	4922	491	857	18.5
	Lincoln Compressor Station	843	4922	2,177	385	10.3
	Bluewater Compressor Station	882	4922	6,763	907	25.8
	Eunice B&C Compressor Station	669	4922	51,475	776	67.8

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Metric Tons)	CH_4 Emissions (Metric Tons)	CO_2e Emissions (Thousand Metric Tons)
Mid America Pipeline	Huerfano Pump Station	1201	4619	27,824	1	27.8
	San Ysidro Pump Station	1114	4619	21,788	0	21.8
	San Luis Pump Station	1109	4619	14,724	0	14.7
Enterprise Field Services LLC	Chaco Gas Plant	1148	1311	463,148	9	463.3
	Blanco Compressor C and D Station	3552	1311	251,295	5	251.4
	Rattlesnake Canyon Compressor Station	1423	4922	33,441	481	43.6
	South Carlsbad Compressor Station	218	4922	39,287	1	39.3
	Cedar Hill Compressor Station	1331	4922	19,977	648	33.6
Davis Gas Processing	Denton Gas Plant	568	1321	12,638	126	15.3
Souther Union Gas Limited	Jal No3 Gas Plant	569	1321	155,714	376	163.6
	West Eunice Compressor Station	755	1311	20,125	0	20.1
	Jal No4 Compressor Station	570	4922	0	0	0.0
Frontier Field Services LLC	Empire Abo Gas Plant	191	1321	73,443	119	76.0
	Maljamar Gas Plant	565	1321	36,208	79	37.9
Agave Energy Company	Red Bluff No3 Compressor Station	19	4922	8,500	105	10.7
	Bitter Lake Compressor Station	14	4922	12,277	27	12.8
	Agave Dagger Draw Gas Plant	211	1321	4,133	39	4.9
Yates Petroleum	Penasco Compressor Station	262	4922	3,541	102	5.7
Foamex	Santa Teresa Plant	133	3086	372	0	0.4
NuStar Logistics Operation LP	Hope Pump Station	52	4613	4,158	0	4.2
New Mexico Gas Company	Espejo Compressor Station	1110	4922	2,578	22	3.0
	PNM - Star Lake Compressor Station	905	4922	9,626	64	11.0
Black Hills Midstream LLC	Espinosa Canyon Amine Plant	21709	1311	19,330	0	19.3
Natural Gas Pipeline Company	Compressor Station No167	667	4922	5,784	27	6.3
Western Gas Resources	San Juan River Gas Plant	1252	1321	42,502	731	57.8
Intrepid Potash New Mexico LLC	East KCl Compaction	208	1474	69,264	1	69.3
Mosaic Potash Carlsbad Inc	Mosaic Potash Carlsbad Inc	196	1474	35,038	1	35.1
Freeport-McMoRan Chino Mines Co	Chino Mine - Hurley Facility	526	1021	0	0	0.0
	Tyrone Mine	527	1021	14	0	0.0
DairiConcenpts LLC	Portales	1094	2023	37,252	1	37.3
American Gypsum	Bernalillo (Wallboard) Plant	1104	3275	18,467	0	18.5
State of New Mexico	New Mexico State University Campus	144	8221	31,346	19	31.8
US Department of Energy	Los Alamos National Laboratory	856	9711	56,460	1	56.5
US Department of Defense	White Sands Missile Range	141	9711	3,897	0	3.9
	Holloman Air Force Base	942	9711	3,897	4	4.0
Total Metric tons CO_2				26,404,817		

Owner	Master AI Facility Name	AI ID[1]	SIC[2]	CO_2 Emissions (Metric Tons)	CH_4 Emissions (Metric Tons)	CO_2e Emissions (Thousand Metric Tons)
Total Metric tons CO_2e from CH_4					1,270,378	
Total CO_2e emissions (Thousand Metric Tons)						***27,675.2***
[1] NMED Facility Identification Number						
[2] Standard Industrial Classification Code						