

University Lands O&G Methane Emissions Calculation (2009 - 2014)

EIA - US Production

	2009	2010	2011	2012	2013	2014
Natural Gas Production (MMcf)	22,984,608	23,940,140	26,062,382	27,497,670	27,663,082	29,527,279
Oil Production (Mbbbl)	1,954,241	1,998,583	2,057,608	2,370,114	2,720,782	3,178,306

University Lands - UL Production

	2009	2010	2011	2012	2013	2014
Natural Gas Production (MMcf)	88,582	82,694	85,281	98,416	122,163	169,925
Oil Production (Mbbbl)	16,271	19,230	22,818	28,108	35,893	43,882

CALCULATE % ENERGY PRODUCED ON UL:

	2009	2010	2011	2012	2013	2014
% Gas Production	0.4%	0.3%	0.3%	0.4%	0.4%	0.6%
% Oil Production	0.8%	1.0%	1.1%	1.2%	1.3%	1.4%
% Total Energy Production	0.5%	0.5%	0.6%	0.6%	0.8%	0.9%

GHGI Emissions

<i>Petroleum Systems (kt CH4)</i>	2009	2010	2011	2012	2013	2014
Net	2,083	2,163	2,251	2,335	2,588	2,726
Refining	25	26	28	27	26	23
Total (w/o refining)	2,058	2,137	2,223	2,308	2,562	2,703

<i>Natural Gas Systems (kt CH4)</i>	2009	2010	2011	2012	2013	2014
Production	4,348	4,330	4,352	4,442	4,429	4,359
Processing	768	717	851	891	904	960
Transmission & Storage	1,186	1,100	1,152	1,116	1,232	1,282
Distribution	556	500	449	457	458	444
Net	6,858	6,647	6,803	6,906	7,023	7,045
Total (w/o distribution)	6,301	6,148	6,355	6,449	6,565	6,601

Total Emissions (MT CH4 (no refining or distribution))	8,359,400	8,284,600	8,577,600	8,757,000	9,126,600	9,304,100
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CALCULATE EMISSIONS ON UL BY APPLYING PRODUCTION %:

	2009	2010	2011	2012	2013	2014
% Total Energy Production	0.5%	0.5%	0.6%	0.6%	0.8%	0.9%
Total Emissions (MT CH4 (no refining or distribution))	8,359,400	8,284,600	8,577,600	8,757,000	9,126,600	9,304,100

CH4 Emissions on UL	44,385	45,042	48,816	55,160	68,996	81,953
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Total UL Emissions (2009-2014) =	344,352	MT CH4
Total UL Emissions (2009-2014) =	11,707,976	MT CO2e (GWP = 34)