



Market Opportunities for Biogas Recovery Systems

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B iogas recovery systems at livestock operations can be a cost-effective source of clean, renewable energy that reduces greenhouse gas emissions. Because of its high energy content, biogas can be collected from manure and burned to supply on-farm energy needs for electricity or heating. As of April 2010, there were approximately 150 operational anaerobic digestion systems in the U.S. Biogas recovery systems are technically feasible at more than 8,000 U.S. dairy and swine operations. These facilities offer a substantial business opportunity to increase farm income. Biogas recovery

systems at these facilities have the potential to collectively generate more than 13 million megawatt-hours (MWh) per year and displace about 1,670 megawatts (MW) of fossil fuel-fired generation. In addition, biogas recovery systems are also feasible at some poultry operations.

Animal Sector	Candidate Farms	Electricity Generating Potential	
		MW	MWh/year
Swine	5,596	804	6,341,527
Dairy	2,645	863	6,802,914
Total	8,241	1,667	13,144,441

Top 10 States for Electricity Generating Potential from Manure Biogas Recovery Systems*

State	Number of Candidate Farms	Methane Emissions Reductions (1,000 Tons)	Methane Production Potential (billion ft ³ /year)	Energy Production Potential (1000 MMBtu/year)	Electricity Generation Potential (1,000 MWh/year)
SWINE FARMS					
Iowa	1,997	301	21.5	19,818	1,829
North Carolina	939	203	13.2	12,145	1,121
Minnesota	707	63	7.3	6,726	621
Illinois	350	39	4.3	3,936	363
Missouri	154	34	3.5	3,265	301
Indiana	296	31	3.5	3,208	296
Oklahoma	56	51	3.4	3,164	292
Nebraska	177	27	3.2	2,942	272
Kansas	80	22	2.3	2,161	199
Texas	10	25	1.6	1,516	140
Remaining 40 States	830	109	10.6	9,828	907
Subtotal	5,596	905	74.4	68,710	6,342
DAIRY FARMS					
California	889	341	27.9	25,729	2,375
Idaho	203	99	8.9	8,257	762
New Mexico	110	64	5.3	4,930	455
Texas	155	66	5.0	4,644	429
Wisconsin	251	41	4.5	4,178	386
Washington	125	35	3.4	3,183	294
Arizona	54	44	3.1	2,851	263
Michigan	107	26	2.9	2,661	246
New York	111	18	2.1	1,915	177
Colorado	54	22	2.0	1,889	174
Remaining 40 States	588	152	14.6	13,473	1,243
Subtotal	2,645	908	79.9	73,709	6,803
U.S. Total	8,241	1,813	154	142,419	13,144

* Preliminary assessment based on the 2007 Census of Agriculture. Subtotals and totals may not add due to rounding. A full report will be posted on the AgSTAR website, www.epa.gov/agstar later this year.