

## Coal Mine Methane Recovery at Active and Abandoned U.S. Coal Mines: Current Projects and Potential Opportunities

Updated July 2019



The following tables identify current and potential methane utilization project opportunities at U.S. coal mines. Additional information can be found in CMOP's report "[Identifying Opportunities for Methane Recovery at U.S. Coal Mines: Profiles of Selected Gassy Underground Coal Mines 2002-2016](#)", which profiles the 35 gassiest U.S. mines. Please note that the tables below include additional mines not among the 35 gassiest U.S. mines, but that still have gas drainage operations.

### Underground Coal Mines (U)

#### Alabama

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
No. 4 Mine (U)	Warrior Met Coal Mining LLC	3.6	8.0	90%	Natural gas pipeline injection	1,271,135
No. 7 Mine (U)	Warrior Met Coal Mining LLC	13.7	17.1	89%	Natural gas pipeline injection	2,670,822
Oak Grove (U)	Oak Grove Resources LLC (Seneca Coal Resources)	4.2	3.3	100%	Natural gas pipeline injection	583,763
Shoal Creek (U)	Drummond Company Inc.	2.2	8.0	86%	Natural gas pipeline injection	1,198,704

#### Colorado

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
Bowie No. 2 Mine (U)	Bowie Resources LLC	1.5	N/A	N/A	N/A	N/A
West Elk Mine (U)	Mountain Coal Company LLC (Arch Coal Inc.)	1.6	1.0	25%	Mine air heating	42,211

(U) – Underground Mine  
 (A) – Abandoned Underground Mine  
 (S) – Surface Mine

<sup>1</sup> Million cubic feet per day (2016)  
<sup>2</sup> Metric tonnes CO<sub>2</sub> equivalent per year at a GWP for CH<sub>4</sub> of 25 (2016)

**Illinois**

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
The American Coal Company New Era Mine (U)	The American Coal Company (Murray Energy Corp.)	4.5	N/A	N/A	N/A	N/A
The American Coal Company New Future Mine (U)	The American Coal Company (Murray Energy Corp.)	6.8	N/A	N/A	N/A	N/A
Hamilton County Coal Mine #1 (U)	Hamilton County Coal, LLC (Alliance Resource Partners LP)	2.2	N/A	N/A	N/A	N/A
Mach #1 Mine (U)	Mach Mining LLC (Foresight Energy Labor LLC)	2.7	N/A	N/A	N/A	N/A
Pattiki Mine (U)	White County Coal, LLC (Alliance Resource Partners LP)	2.1	N/A	N/A	N/A	N/A

**Indiana**

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
Carlisle Mine (U)	Sunrise Coal LLC (Hallador Energy Company)	1.1	0.8	N/A	N/A	N/A
Gibson Mine (U)	Gibson County Coal LLC (Alliance Resource Partners LP)	4.2	N/A	N/A	N/A	N/A
Gibson South (U)	Gibson County Coal LLC (Alliance Resource Partners LP)	2.5	N/A	N/A	N/A	N/A
Oaktown Fuels Mine No. 1 (U)	Sunrise Coal LLC (Hallador Energy Company)	2.6	0.3	N/A	N/A	N/A
Oaktown Fuels Mine No. 2 (U)	Sunrise Coal LLC (Hallador Energy Company)	2.4	0.1	N/A	N/A	N/A

**New Mexico**

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
San Juan Mine 1 (U)	San Juan Coal Company (Westmoreland Coal Company)	3.9	0.7	N/A	N/A	N/A

(U) – Underground Mine  
 (A) – Abandoned Underground Mine  
 (S) – Surface Mine

<sup>1</sup> Million cubic feet per day (2016)  
<sup>2</sup> Metric tonnes CO<sub>2</sub> equivalent per year at a GWP for CH<sub>4</sub> of 25 (2016)

## Oklahoma

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
P8 North (U)	Txoma Mining LLC (L. Keller Smith)	2.2	N/A	N/A	N/A	N/A

## Pennsylvania

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
Bailey Mine (U)	CONSOL Pennsylvania Coal Company LLC (CONSOL Energy Inc.)	7.8	3.6	4%	Natural gas pipeline injection	25,423
Cumberland Mine (U)	Cumberland Coal Resources LP (Contura Energy Inc.)	7.4	4.2	24%	Natural gas pipeline injection	171,723
Emerald Mine No. 1 (U)	Emerald Coal Resources LP (Contura Energy Inc.)	0.4	1.5	9%	Natural gas pipeline injection	25,423
Enlow Fork Mine (U)	CONSOL Pennsylvania Coal Company (CONSOL Energy Inc.)	9.8	>0.1	N/A	N/A	N/A
Harvey Mine (U)	CONSOL Pennsylvania Coal Company (CONSOL Energy Inc.)	4.2	2.7	N/A	N/A	N/A

## Utah

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
West Ridge Mine (U)	West Ridge Resources Inc. (Murray Energy Corp.)	0.2	N/A	N/A	N/A	N/A

## Virginia

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
Buchanan Mine #1 (U)	Buchanan Minerals, LLC (Coronado IV LLC)	8.9	53.8	100%	Natural gas pipeline injection, coal drying, 88 MW peaking power plant	9,412,634
Deep Mine 41 (U)	Paramount Contura, LLC (Contura Energy Inc.)	4.2	N/A	N/A	N/A	N/A

(U) - Underground Mine  
 (A) - Abandoned Underground Mine  
 (S) - Surface Mine

<sup>1</sup> Million cubic feet per day (2016)  
<sup>2</sup> Metric tonnes CO<sub>2</sub> equivalent per year at a GWP for CH<sub>4</sub> of 25 (2016)

## West Virginia

Mine Name	Company	VAM Emissions <sup>1</sup>	Drained Gas <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
American Eagle Mine (U)	Panther Creek Mining LLC (Blackhawk Mining LLC)	3.0	N/A	N/A	N/A	N/A
Beckley Pocahontas Mine (U)	ICG Beckley LLC (Arch Coal Inc.)	3.6	N/A	N/A	Natural gas pipeline injection	N/A
Federal No. 2 (U)	Phoenix Federal No 2 Mining, LLC.	2.1	N/A	N/A	On-site blowers	N/A
Harrison County Mine (U)	The Harrison County Coal Company (Murray Energy Corp.)	6.8	2.7	10%	Natural gas pipeline injection	45,569
Leer Mine (U)	ACI Tygart Valley (Arch Coal Inc.)	4.5	N/A	N/A	N/A	N/A
Marion County Mine (U)	The Marion County Coal Company (Murray Energy Corp.)	12.1	1.4	10%	Natural gas pipeline injection	24,463
Marshall County Mine (U)	The Marshall County Coal Company (Murray Energy Corp.)	12.2	3.7	65%	Natural gas pipeline injection, VAM Destruction	426,909
Monongalia County Mine (U)	The Monongalia County Coal Company (Murray Energy Corp.)	6.0	2.8	3%	Natural gas pipeline injection	17,268
Ohio County Mine (U)	The Ohio County Coal Company (Murray Energy Corp.)	4.5	N/A	N/A	N/A	N/A
Pinnacle (U)	Pinnacle Mining Company (Seneca Coal Resources LLC)	4.5	0.2	97%	Natural gas pipeline injection	41,732
Road Fork #51 Mine (U)	Spartan Mining Company, LLC (Contura Energy Inc)	0.2	N/A	N/A	Natural gas pipeline injection	N/A
Sentinel Mine (U)	Wolf Run Mining LLC (Arch Coal Inc.)	2.3	N/A	N/A	N/A	N/A
Tunnel Ridge Mine (U)	Tunnel Ridge, LLC (Alliance Resource Partners LP)	3.4	N/A	N/A	N/A	N/A

\* Mines using methane drainage in 2016 but not represented among the 35 highest emitting mines are: Bowie No. 2 Mine (MSHA ID 0504591), West Ridge Mine (MSHA ID 4202233), Carlisle Mine (MSHA ID 1202349), Emerald Mine No. 1 (MSHA ID 3605466), and Road Fork #51 Mine (MSHA ID 4601544).

\*\* One active mine in this Profile that previously used methane drainage but that did not do so in 2016 is the Beckley Pocahontas Mine (MSHA ID 4605252).

\*\*\* An active mine that does not appear in this Profile but that employed methane drainage prior to 2016 is the Dugout Canyon Mine (MSHA ID 4201890).

(U) – Underground Mine  
 (A) – Abandoned Underground Mine  
 (S) – Surface Mine

<sup>1</sup> Million cubic feet per day (2016)  
<sup>2</sup> Metric tonnes CO<sub>2</sub> equivalent per year at a GWP for CH<sub>4</sub> of 25 (2016)

## Abandoned Coal Mines (A)

### Alabama

Mine Name	Company	Gas Production/ Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Blue Creek No. 5 Mine (A)	Jim Walter Resources Inc.	0.094	Gas recovery project	16,433

### Colorado

Mine Name	Company	Gas Production/ Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Dutch Creek No. 1 (A)	Mid-Continent Resources, Inc.	0.426	Sealed	N/A
Dutch Creek No. 2 (A)	Mid-Continent Resources, Inc.	0.351	Sealed	N/A
Elk Creek (A)	Oxbow Minerals	2.229	Sealed	N/A
Golden Eagle (A)	Basin Resources Inc.	0.706	Gas recovery project	123,782
Sanborn Creek (A)	Oxbow Minerals	0.601	Sealed	N/A

### Illinois

Mine Name	Company	Gas Production/ Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
MC #1 Mine (A)	Labco, LLC	7.0	N/A	N/A
Old Ben No 21 (A)	Old Ben Coal Co.	0.128	Gas recovery project	22,490
Old Ben No. 24 (A)	Old Ben Coal Co.	0.116	Gas recovery project	20,285
Old Ben No. 25 (A)	Old Ben Coal Co.	0.093	Gas recovery project	16,310
Old Ben No. 26 (A)	Old Ben Coal Co.	0.154	Gas recovery project	27,047
Orient #3 (A)	Freeman United Coal Mining Co.	0.116	Gas recovery project	20,365
Orient No. 6 (A)	Freeman United Coal Mining Co.	0.094	Gas recovery project	16,466
Patikki Mine (A)	White County Coal	0.208	Sealed	N/A
Wabash Mine (A)	Wabash Mine Holding Company	0.282	Sealed	N/A
Willow Lake Portal (A)	Bay Ridge Inc. (Peabody Energy Corp.)	0.424	Sealed	N/A

### Indiana

Mine Name	Company	Gas Production/ Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Kings (A)	Kings Station	0.017	Gas recovery project	3,061

### Kentucky

Mine Name	Company	Gas Production/ Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Mine #1 (A)	Freedom Energy Mining Company (Alpha Natural Resources, Inc.)	0.185	Unknown	N/A
No. 3 Mine (A)	Excel Mining LLC (Alliance Resource Partners LP)	0.308	Unknown	N/A

(U) – Underground Mine  
 (A) – Abandoned Underground Mine  
 (S) – Surface Mine

<sup>1</sup> Million cubic feet per day (2016)  
<sup>2</sup> Metric tonnes CO<sub>2</sub> equivalent per year at a GWP for CH<sub>4</sub> of 25 (2016)

## Ohio

Mine Name	Company	Gas Production/Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Nelms #1 (A)	Harrison Mining Corp.	0.182	Gas recovery project	32,832

## Oklahoma

Mine Name	Company	Gas Production/Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
South Central Mine (A)	South Central Coal Company Inc.	0.131	Unknown	N/A

## Pennsylvania

Mine Name	Company	Gas Production/Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Bethlehem No. 32 (A)	BethEnergy	0.349	Sealed	N/A
Cambria Slope No. 33 (A)	BethEnergy	1.233	Gas recovery project	216,105
Gateway Mine (A)	Gateway Coal Company	0.206	Gas recovery project	36,073

## Utah

Mine Name	Company	Gas Production/Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Aberdeen (A)	Andalex Resources Inc.	0.384	Gas recovery project	67,292
Soldier Canyon (A)	Arch Coal	0.342	Sealed	N/A
Willow Creek (A)	RAG	0.222	Sealed	N/A

## Virginia

Mine Name	Company	Gas Production/Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Amonate No. 31 (A)	Consolidated Coal Co.	0.252	Unknown	N/A
Beatrice (A)	Consolidated Coal Co.	0.633	Sealed	N/A
D-R-1 (A)	Dickenson-Russell Coal Co., LLC	0.243	Unknown	N/A
No. 2 (A)	Black Dog Coal Company (Alpha Natural Resources LLC)	0.136	Unknown	N/A
Virginia Pocahontas No. 1 (A)	Consolidated Coal Co.	0.886	Gas recovery project	155,274
Virginia Pocahontas No. 2 (A)	Island Creek Coal Co.	0.531	Gas recovery project	93,084
Virginia Pocahontas No. 3 (A)	Consolidated Coal Co.	0.894	Gas recovery project	156,621
Virginia Pocahontas No. 4 (A)	Island Creek Coal Company	0.143	Gas recovery project	25,114
Virginia Pocahontas No. 6 (A)	Consolidated Coal Co.	0.854	Gas recovery project	149,668
Virginia Pocahontas No. 8 (A)	Island Creek Coal Company	5.179	Gas recovery project	907,526

(U) – Underground Mine  
 (A) – Abandoned Underground Mine  
 (S) – Surface Mine

<sup>1</sup> Million cubic feet per day (2016)  
<sup>2</sup> Metric tonnes CO<sub>2</sub> equivalent per year at a GWP for CH<sub>4</sub> of 25 (2016)

## West Virginia

Mine Name	Company	Gas Production/ Potential <sup>1</sup>	Mine Status	GHG Emissions Avoided <sup>2</sup>
Arkwright No. 1 (A)	Consolidation Coal Co.	0.638	Gas recovery project	111,733
Blacksville No. 1 (A)	Consolidated Coal Co.	0.415	Gas recovery project	72,737
Bonny (A)	Beckley Lick Run	0.290	Sealed	N/A
Consol No. 9 (A)	CONSOL Energy, Inc.	0.449	Gas recovery project	78,742
Consol No. 20 (A)	Consolidation Coal Co.	0.113	Gas recovery project	19,807
Ireland (A)	Consolidated Coal Co.	0.132	Gas recovery project	23,116
Maple Meadow (A)	Penn Virginia	0.293	Sealed	N/A
Osage No. 3 (A)	Consolidation Coal Co.	0.574	Gas recovery project	100,565
Valley Camp 3 (A)	Valley Camp	0.075	Gas recovery project	13,144
Whitetail Kittanning Mine (A)	Kingwood Mining Company LLC	0.243	Unknown	N/A
Windsor Mine (A)	Windsor Coal Company	0.057	Gas recovery project	10,037

## Surface Coal Mines (S)

### Montana

Mine Name	Company	Gas Potential <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
Rosebud (S)	Western Energy Company (Westmoreland Coal Company)	0.8	N/A	N/A	N/A

### Wyoming

Mine Name	Company	Gas Potential <sup>1</sup>	Drained Gas Utilized	End Use	GHG Emissions Avoided <sup>2</sup>
Antelope (S)	Antelope Coal LLC (Cloud Peak Energy Resources LLC)	2.9	N/A	N/A	N/A
Belle Ayr (S)	Alpha Coal West Incorporated (Alpha Natural Resources LLC)	1.5	N/A	N/A	N/A
Black Thunder (S)	Thunder Basin Coal Company LLC (Arch Coal Inc.)	8.2	N/A	N/A	N/A
Buckskin (S)	Kiewit Mining Group (Kiewit Peter Sons' Incorporated)	1.1	N/A	N/A	N/A
Caballo (S)	Peabody Caballo Minding, LLC (Peabody Energy)	0.9	N/A	N/A	N/A
Cordero Mine (S)	Cordero Mining LLC (Cloud Peak Energy Resources LLC)	1.9	N/A	N/A	N/A
Eagle Butte (S)	Alpha Coal West, Inc. (Alpha Natural Resources, Inc.)	1.6	N/A	N/A	N/A
North Antelope Rochelle (S)	Peabody Powder River Mining LLC (Peabody Energy)	9.0	N/A	N/A	N/A

(U) – Underground Mine  
 (A) – Abandoned Underground Mine  
 (S) – Surface Mine

<sup>1</sup> Million cubic feet per day (2016)  
<sup>2</sup> Metric tonnes CO<sub>2</sub> equivalent per year at a GWP for CH<sub>4</sub> of 25 (2016)