COAL SEAM GAS



Quarterly Newsletter

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MISSION

The North American Coalbed Methane Forum (NACBMF) was established in 1985 to advance coal mine safety, to promote coalbed methane/coal seam gas as a world-wide energy resource and to increase knowledge of coalbed methane through education and publications.

WHAT'S NEW

The new managing editor of the Coal Seam Quarterly Newsletter is David Cercone of US Department of Energy's National Energy Technology Laboratory. He may be reached at david.cercone@netl.doe.gov. Reader contributions are welcome.

COAL, COALBED METHANE AND NATURAL GAS NEWS

Total Natural Gas Production in United States, 2018: **37,009 BCF**¹ Flared Natural Gas in United States, 2018: **498 BCF**² Coal Bed Methane Production in United States, 2017: **980 BCF**³ Electric Power Generation by Natural Gas in the United States, 2018: **1,468,013 GWh**⁴ Total Nonmetallurgical Coal Production in the United States, 2018: **676.5 MMst**⁵ Electric Power Generated by Coal in the United States, 2018: **1,146,393 GWh**⁴ Total Metallurgical Coal Production in the United States, 2018: **79.3 MMst**⁵

¹Natural Gas Gross Withdrawals and Production https://www.eia.gov/dnav/ng/ng-prod-sum-dc-NUS-mmcf-a.htm

²The World Bank Global Gas Flaring Reduction Partnership (GGFR) http://pubdocs.worldbank.org/en/603281560185748682/pdf/Gas-flaring-volumes-Top-30-countries-2014-2018.pdf

³Coalbed Methane Production https://www.eia.gov/dnav/ng/ng-prod-coalbed-s1-a.htm

⁴EIA Electricity Data Browser https://www.eia.gov/electricity/data/browser/

⁵EIA Annual Coal Report 2019 https://www.eia.gov/coal/annual/pdf/acr.pdf

SUMMARY OF OCTOBER BOARD MEETING

Dr. Thakur mentioned that the forum, at the present time, is encountering some difficulties, but he reconfirmed that the forum will continue in its mission to advance coal mine safety, to promote coalbed methane/coal seam gas as a worldwide energy resource and to increase knowledge of coalbed methane through education and publications. Technical topics are beginning to be developed for the 35th Annual Forum Meeting in Spring 2020. The anticipated dates for the 2020 meeting are likely to be in early April.

NACBM BEGIN PREPARATIONS FOR THE 35TH ANNUAL MEETING

The forum has recently begun to prepare for the 35th Annual Meeting in 2020. Board members have requested that members start the recruitment of Subject Matter Experts in the fields of:

- 1. Deep Mine CBM Exploration and Carbon Storage
- 2. Underground Coal Liquifaction

Status of US Coalbed Methane Activities AAPG - Energy & Minerals Division, May, 2019.

The EIA (2009a) shows a map of U.S. lower 48 states CBM fields (as of April 2009). U.S. annual CBM production peaked at 1.966 trillion cubic feet (Tcf) in 2008 (EIA, 2009b, 2010, 2018c). CBM production declined to 980 billion cubic feet (Bcf) in 2017 (EIA, 2018a), the lowest level since 1996, representing 3.6% of the U.S. total natural gas production of 27.3 Tcf (EIA, 2018b; Figure 1). According to EIA (2018a, their Table 15; 2018c), the top 7 CBM-producing U.S. states during 2017 (production in billion cubic feet, Bcf) were Colorado (338), New Mexico (234), Wyoming (135), Virginia (99), Alabama (62), Oklahoma (36), and Utah (36). Annual CBM production decreased for each state over the previous year except Alabama (EIA 2018a; Figure 2). Cumulative U.S. CBM production from 1989 through 2017 was 36.7 Tcf. According to EIA (2018a), annual peak CBM production in the top 7 CBM producing U.S. states during 2017 occurred in the following years: Colorado (2010), New Mexico (1997), Wyoming (2008), Virginia (2009), Alabama (1998), Oklahoma (2007), and Utah (2002) (Figure 2).

Indian Coal Imports Increase 41%, Coal Age Magazine, Sept 2019

Indian coal imports during the April to June quarter have been pegged at 18.45 million metric tons, up 41% over the previous year according to data from the Central Electricity Authority.

Carbon Capture and Storage, Coal Age, August, 2019

Enchant Energy Corp. recently published a Sargent & Lundy (S&L) engineering report on the feasibility of a carbon capture retrofit project at San Juan Generating Station (SJGS) in New Mexico. Subject to the approval of the city of Farmington, Enchant Energy will acquire a 95% ownership interest in the 847megawatt (MW) SJGS. The S&L findings, which were made public June 27 at a U.S. Energy Association briefing, estimate the cost of CO2 capture will range from \$39 to \$43 per metric ton, a significant decrease from the last major carbon capture retrofit at the Petra Nova facility in Texas. Given these cost estimates, the \$1.3 billion cost to retrofit SJGS can be financed entirely with newly revamped Internal Revenue Code Section 45Q tax credits and will not burden SJGS with additional operating costs. The report found that the carbon capture retrofit would result in a 90% decrease in CO2 emissions at SJGS, a figure compliant with the recently enacted New Mexico Energy Transition Act's CO2 emission standard. As a result, SJGS would be able to operate economically beyond June 30, 2022, saving more than 400 jobs, while continuing to produce highly reliable, low-priced, low-emissions and low-carbon baseload power at no additional cost to consumers, the report said.

OFFICERS PRESIDENT

P. Thakur

ESMS

pramodthakur@frontier.com

VP/TREASURER

K. Aminian

West Virginia University

kaminian@wvu.edu

SECRETARY

<u>I Havryluk</u>

Havryluk & Associates

havryluk@zoominternet.net

BOARD OF DIRECTORS

J. D'Amico

DTC

damico.corp@verizon.net

D. Cercone

US DOE/NETL

david.cercone@netl.doe.gov

C. Eckert

Consultant

eckert155@gmail.comec

G. Flick

Steptoe & Johnson PLLC

Gillian.Flick@steptoe-johnson.com

Q. He

Saint Francis University

<u>qhe@francis.edu</u>

G.Kozera

Learned Leadership LLC

gkozera@aol.com

M. Mosser. mmosser72@comcast.net

J. Reilly

Consultant

reillyjoanne@hotmail.com

G. Rodvelt

Halliburton

gary.rodvelt@halliburton.com

C. Saunders

Consol Energy

caseysaunders@consolenergy.

com

S. Schatzel

NIOSH

Zia6@cdc.gov

Honorary life members

C. W. Byrer

D. Uhrin

Managing Editor, Coal Seam Gas Quarterly Newsletter

D. Cercone