



families for PA coal

## You Are the Coal Economy

1200 Maronda Way, Suite 403A  
Monessen, PA 15062  
www.families4pacoal.org

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## Carbon Capture Working in Germany

With global warming concerns increasing worldwide, the development of clean forms of energy is in more demand than ever. Alternative energy sources such as solar and wind power only make up a small percentage of our energy mix (all renewable energy sources combined generate 6% of total energy consumed) and are nowhere near being able to generate the more than 50% of the electricity produced by coal.

Cleaner coal burning power plants seem to be the best solution to our energy crisis. Swedish utility giant Vattenfall recently took a significant step in solving the carbon emissions problem which plague conventional coal fueled power plants with the opening of the world's first carbon capture and storage (CCS) plant south of Berlin in Germany.

Currently, there are three main technology options for capturing the CO<sub>2</sub> produced by power plants. The new German plant uses Oxyfuel combustion, where lignite and hard coal are burned in air from which nitrogen has been removed producing a waste stream of carbon dioxide and water vapor. The water vapor is condensed out and the carbon dioxide is cooled down and liquefied. Postcombustion, where CO<sub>2</sub> is washed from the flue gas after conventional combustion and Precombustion, where a gasification process removes the carbon from the fuel before the resulting hydrogen gas is combusted.

While CCS trials are also underway in various countries including Norway, Algeria and Australia, the pilot plant at Schwarze Pumpe is the first designed to complete the full CCS chain. First to trap the emissions from the boiler, separate the carbon dioxide and finally bury it in a depleted gas field. At full operation, this pilot plant produces nine tons of carbon dioxide an hour. Initially, the CO<sub>2</sub> is being sold for commercial use, but starting early next year it will be transported to and buried at the Atlmark gas field.

Vattenfall plans to begin a three year testing program at the Schwere Pumpe plant to assess exactly how various components will function together and use the information gained to build two 300 to 500 megawatt "demonstration plants" by 2015 and a large scale CCS power station by 2020.

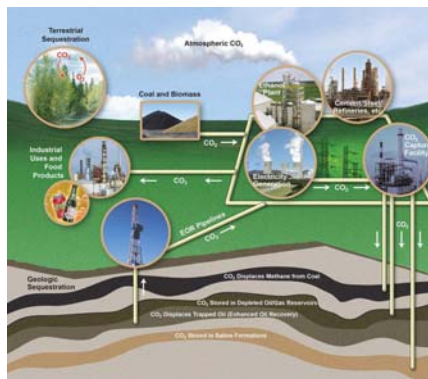
CCS technology does have some obstacles to overcome. Compressing and transporting the CO<sub>2</sub> takes energy, as does the initial extraction of nitrogen. So these processes reduce the plant efficiency by some estimates as much as 25%. Also, the cost to build a CCS Power plant will be significantly more expensive than a conventional plant.

However, if the cap and trade system becomes a reality and CCS techniques grow to be more efficient it may become cheaper to store carbon than to emit it.

Which clean coal technology will be the most environmentally friendly and affordably implemented remains to be seen. In upcoming issues of the Coal Scoop we plan to take a closer look at some of these new technologies that are being explored here in Pennsylvania.



Schwarze Pumpe Pilot Plant



CCS Diagram provided by the U.S. DEP

## Did You Know That Coal is Vital to PA....

### Coal Keeps Our Utility Cost Low

- The Average price of electricity in Pennsylvania is 8.68 cents per Kilowatt hour, while the national average is 8.9 cents. Our neighbors in New York pay 15.27 cents per kilowatt hour and those in New Jersey 11.88 cents per

kilowatt hour.

### Coal Helps Our Economy

- In Pennsylvania, our coal miners produced 77 million tons of coal in 2006 with an economic impact exceeding \$11 billion.

# FEATURED COMPANY

## *Victaulic Corporation*

Since 1925, Victaulic has been the world's leading manufacturer of mechanical pipe joining systems for the mining industry. As one of the oldest markets Victaulic serves, the company has developed a number of mining specific products that allow users to join pipe faster, easier and more economically. Today the company continues the tradition of finding better, safer and faster technologies for joining piping systems.

Victaulic developed the groove piping system as a faster method for joining pipe during the first world war. Supplying water and fuel to front line troops under fire created a need for the fastest possible pipe joining technology. This brought about the development of the grooved piping system which was later used for a variety of commercial applications such as mining, building heating and cooling, fire protection and others.

The groove system has four basic components, the groove- either cut or roll grooved into the pipe ends, the coupling housing, the gasket and bolts and nuts. This system provides a union at every joint for easy access to the system for maintenance and system expansions. With sizes ranging from ¾ up to 42" and pressures up to 4000 psi the

groove system is designed for very demanding services.

The groove system is offered with flexible or rigid couplings allowing designers a wider range of choices for their piping systems. Victaulic flexible couplings are used extensively in mining operations because of their ability to handle deflection allowing them to be used on uneven surfaces.

Victaulic has also developed products for non-metallic piping. For HDPE piping Victaulic developed a plain end coupling that quickly joins pipe without the need for special pipe preparation or special equipment.

This reduces the time needed for installation by up to 40% while also providing a union for future expansion or maintenance needs.

For PVC systems the Victaulic Aquamine product line is a reusable piping system that is easy to deploy for water supply lines.

More recently Victaulic has developed a new line of "installation-ready" couplings that dramatically reduce installation times versus other joining methods, including current grooved systems. The system has no loose parts making it safer and more efficient than any other joining technology on the market today.



### F.O.R.C.E. Annual Meeting

#### Attending Five Year Members



George Marcinko, Regal Corporation; Bob Penigar, Rosebud Mining Co. and Nina Gysegem, GIA. Missing from photo but in attendance Dan Statler from Jennmar Corp.

Can you believe at our Annual Membership Meeting on November 13, 2008 held at Cedarbrook Golf Course in Belle Vernon, F.O.R.C.E. celebrated it's 5th Anniversary! While we definitely made some progress in getting our message out about coal's importance to PA, we have much more to do. As part of the festivities, awards were given to those attending members who have been with us since the beginning, and the people responsible for making F.O.R.C.E. - families for PA coal a reality; our charter board.

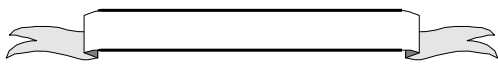
During the program, some of our 2008 undertakings were discussed, as well as our upcoming goals and projects. Votes were also cast for our expiring board members. Featured speaker for the event was Jim McCaffrey, Sr. Vice President - Materials & Supply Chain Management & Sr. Vice President - CNX Land Resources.

Thanks to all of our members who graciously supported this event as well as our fundraisers this year. We at F.O.R.C.E. wish everyone a happy and prosperous 2009.

#### F.O.R.C.E. Charter Board



Gary Slagel, CONSOL Energy; Doug Farnham, Farnham & Pfile; Kim Rubottum, Bucyrus; Troy Dolan, Conveyor Services Corp.; Steve Gysegem, 18 Karat Inc.; Michael Lee, Lee Supply Co. and Tom Crooks R.G. Johnson Co.



**WELCOME NEW  
F.O.R.C.E. MEMBER  
COMPANIES AND  
EMPLOYEES**

**John Kosky  
Contracting, Inc.**

Coal Producer and Site Development

**Lemac Mine Supply, Inc.**

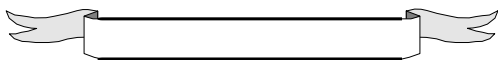
Rebuilders of Mining Equipment

**RFI Energy, LP**

Coal Sales

**Traval Contractors  
Supply, Inc.**

Heavy Equipment Sales and Service



**Legislative Update - PA Election Results**

**Row Offices**

Incumbents Tom Corbett (R) and Jack Wagner (D) handily won their reelection bids for Attorney General and Auditor General, respectively. Democrat Rob McCord defeated Tom Ellis for Treasurer.

**Congress**

*US Senate*

The makeup of the Senate will at least have 54 Democrats (and two Independents) who vote with the Caucus. There are four undecided seats remaining.

*US House*

In the House, Democrats picked up at least 20 seats to expand their majority to 256-178.

In Pennsylvania, incumbent Republican Phil English was defeated; Republican Glen Thompson held the Peterson seat and all remaining incumbents won, including Democrats Jack Murtha and Paul Kanjorski.

**State Senate**

Despite a watershed election for the Democrats, state Republicans actually increased their majority in the state Senate by one vote and will enter the next session with a comfortable 30-20 edge.

Republicans picked up the 47<sup>th</sup> District seat of retiring Democratic Senator Jerry LaValle (Republican Elder Vogel beating Democrat Jason Petrella) while Republican Kim Ward held the Regola GOP seat in Westmoreland County.

**State House**

Democrats picked up three seats to expand their majority in the House to 105-98, winning the following districts:

- House District 13 (Hershey seat):* Tom Houghton (47%) defeats John Lawrence (46%)
- House District 31 (Steil seat):* Steve Santarsiero (53%) defeats Pete Stainthorpe (47%)
- House District 70:* Matthew Bradford (51%) defeats Representative Jay Moyer (49%)
- House District 83 (Cappelli seat):* Rick Mirabito (58%) defeats Dave Huffman (42%)
- House District 157 (Rubley seat):* Paul Drucker (51%) defeats Guy Ciarrocchi (49%)
- House District 170 (Kenney seat):* Brendan Boyle (59%) defeats Matt Taubenberger (41%)

Meanwhile, Republicans picked up the following three seats:

- House District 15:* Jim Christiana (52%) defeats Representative Vince Biancucci (48%)
- House District 57 (Tangretti seat):* Tim Krieger (52%) defeats John Boyle (48%)
- House District 75:* Matthew Gabler (53%) defeats Representative Dan Surra (47%)

*Information Provided by the Pennsylvania Coal Association*

**Sierra Club Claims Victory Over Utah Power Plant**

The Sierra Club won a bid made before the EPA's Environmental Appeals Board to overturn the air quality permit issued to the proposed coal-fired Bonanza Power Plant in Utah because it did not require controls on carbon dioxide emissions - only monitoring and reporting.

The appeals board avoided the key questions of whether carbon dioxide is currently "subject to regulation" under the Clean Air Act. On one hand, the appeals board stated that the EPA is not *required* to treat CO2 as "subject to regulation" but on the other hand, found that the EPA *could exercise its discretion* to treat CO2 as "subject to regulation," and thus require permit limits for CO2 based on the "best available control technology" (BACT). The permit was then remanded back to the EPA Region 8 with guidelines to consider how "BACT" could be used to limit CO2 emissions and to "develop an adequate record for its decision." With those instructions it will be nearly impossible for EPA to take action until after President-elect Barack

Obama's administration takes office. In closing the EAB recognized that this is an issue of national scope and has implications far beyond this specific permitting proceeding.

One significant outcome the EPA will need to consider before making a final ruling is that under the Clean Air Act, the permitting authority cannot regulate CO2 for some types of sources and not others. If the CO2 emissions from a coal-fired power plant is "subject to regulation" than according to the Clean Air Act, any source that emits more than 250 tons of CO2 a year would need a Prevention of Significant Deterioration (PSD) permit. The EPA has indicated that most schools, hospitals, and apartment buildings have emissions above this level.

This ruling has created uncertainty not only for the more than 80 pending coal-fired power plants currently in the development stage, but also for any significant building project in an area where the EPA is the permitting authority.



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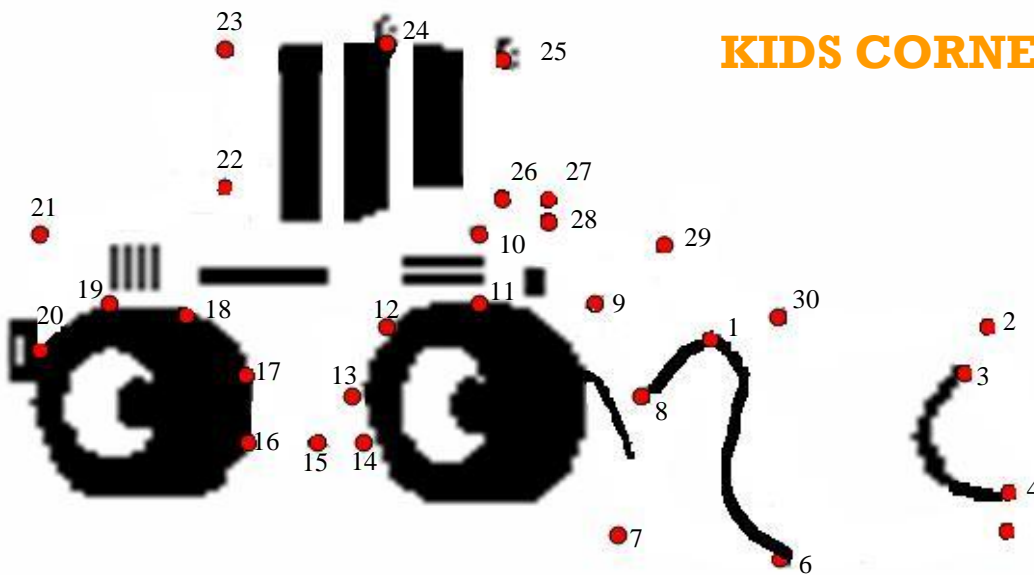
[www.families4pacoal.org](http://www.families4pacoal.org)



# Seasons Greetings



## KIDS CORNER!



Connect the dots to discover a piece of equipment Power Rock needs to move coal.

COAL Generating Power For America And Jobs For PA