# argus Coal Weekly®

AMERICAS COAL NEWS, MARKETS AND ANALYSIS

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# Deja SO<sub>2</sub>

The new SO<sub>2</sub> allowance trading program that takes effect in two months is already starting to resemble its predecessor with lawsuits, regulatory delays and uncertain allowance pricing.

A federal court found the outgoing Clean Air Interstate Rule (CAIR) was inadequate for reducing pollution. Its successor the Cross-State Air Pollution Rule requires industry to slash SO<sub>2</sub> emissions from 8.8mn short tons in 2005 to 2.4mn st by 2014. Many older coal plants, especially in the midwest, are expected to be shuttered because adding controls would be uneconomical, especially with competition from cheap natural gas.

The Environmental Protection Agency (EPA) surprised the industry earlier this month, saying it would not enforce the new rule's state-specific caps until 2014, which would allow more interstate trading as with CAIR. Overnight the value of allowances plummeted for group 2 states from \$1,100/st to \$575/st. The price has since rebounded to \$900, but that is down from \$3,000 two months ago, erasing nearly \$8bn in hypothetical market value for the 3.78mn 2012 allowances.

"It makes you wonder about the credibility of these regulations. That [delay] is a pretty big deal," a utility official said.

EPA could still make more changes, the rule could be put on hold through lengthy judicial proceedings or a court could ultimately vacate the rule, which could leave utilities holding worthless allowances as occurred with CAIR.

Exelon, Calpine and PSEG are backing the rule in court against 45 challenges filed by more emissions-intensive utilities and industry representatives, including Southern Co. The coal-fired utilities opposing the new rule are would-be buyers and sellers of the new allowances, translating to little enthusiasm for actual trading.

The spillover effect in coal markets has been some signs of shifting and preparation for more-expensive bituminous coal-fired demand. Long-term contracts have been signed for ultra-low sulfur Powder River basin (PRB) coal, and plans announced for plants to switch from bituminous coal or lignite to PRB coal. But the overwhelming response by coal buyers has been to take a wait-and-see approach, leading to fewer coal contracts.

In the allowance market, the dearth of trading has left the value untested. Possibly to gain more clarity, FirstEnergy said this week it would auction off at least 100,000 SO<sub>2</sub> allowances next month. At \$900 a pop, that would bring in \$90mn. FirstEnergy may just be trying to see what bids it can get, and the market will see what kind of minimum price FirstEnergy is willing to accept and whether anyone can meet it.

If the verdict is a low price, FirstEnergy could decide to run its fleet next year relying on more modest allowance costs. Other coal generators may do the same.

Lower allowance costs and EPA delays could extend the life of some older coal plants, but at a far lower dispatch rate, with utilities choosing to run them in the summer or seasonally in winter, just enough to get capacity payments in regional power markets. Conversely, natural gas and controlled coal units could run harder year-around. That leaves coal demand for 2012 up in the air, just like the new rule, just like the old rule.

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# Coping with cross-state rule

Bruce Braine is vice president of strategic policy analysis at American Electric Power (AEP). He is also vice-chair of the Electric Power Research Institute (EPRI) Global Climate Change Area Council, and is on the International Emissions Trading Association's board. In this interview, he discussed the likely impact of the Environmental Protection Agency's (EPA) Cross-State Air Pollution Rule (CSAPR) and other pending regulations.

*Argus:* How will AEP be affected by the cross-state rule and will it shift its coal purchasing mix in light of the new regulations?

Braine: The CSAPR rule and the pending utility maximum achievable control technology (MACT) rule will have a very significant impact on AEP's compliance decisions and will change our coal-purchasing mix. As the rules currently stand, we anticipate retiring 5,900MW of coal-fired capacity over the next several years and replacing some of this with new natural gas plants. Most of the coal units we would retire burn Central Appalachian (CAPP) coal, so our mix of these coals is likely to decline. We are likely to increase the mix of somewhat higher-sulfur Northern Appalachian and possibly midwestern coals because a greater percentage of our remaining units will be scrubbed. We will likely also use more very low-sulfur western coal, but some of that would be driven by near-term CSAPR compliance requirements in 2012 and 2013. During this interim phase we would use greater blends of low-sulfur Powder River basin (PRB) coal at some plants, and in particular ultra-low-sulfur PRB coal. But our very low-sulfur PRB coal use would be limited because there is not much of it that can be acquired quickly for 2012 and 2013. PRB coal could be an interim measure for some units because in the longer term — once you reach the second phase of CSAPR and under utility MACT in 2014-2015 when most remaining plants must have scrubbers — the coal's  $SO_2$  content will no longer be as much of a constraint.

*Argus:* Are you currently burning much Illinois basin coal?

**Braine:** We do not burn a lot of midwestern coal. We mostly use Northern Appalachian coal and low-sulfur CAPP coal at our eastern plants, for example. It is possible we would not only increase our relative mix of Northern Appalachian coal but also midwestern coals. But keep in mind that most of AEP's eastern power plants, which represent 80pc of our total system coal capacity, are in West Virginia and Ohio, which traditionally are Northern and Central Appalachian country.

*Argus:* Does it make a big difference that EPA eased some of the CSAPR rules for 2012-2014?

Braine: We were encouraged that EPA issued several revisions to correct technical errors in the final rule, resulting in the allocation of a few more  $SO_2$  and  $NO_x$  allowances. We were even more encouraged that EPA opened up its 30-day comment period - comments are now due by the end of November – for further revisions and technical corrections. There was one helpful revision that we are very supportive of, namely EPA's decision to eliminate the assurance requirements in 2012 and 2013. This assurance elimination permits us to more easily transfer allowances across state lines in our system and meet near-term targets, particularly for NO<sub>x</sub> limits. But we hope to see some more revisions.

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# Cross-state rule to reshape the coal mix

### continued from p2

*Argus:* Will you challenge or request changes to any new or planned state or federal regulations?

**Braine:** On the federal side we have filed for reconsideration of the final CSAPR rule with EPA, but this was before EPA issued its revisions. Now we will ask for technical changes to the CSAPR rule during this 30-day comment period. We have already filed comments on some other rules, like the proposed utility MACT [being finalized in December] and registered our concerns.

Our primary concern with utility MACT is the threeyear timeframe for compliance after the final rule is issued. Three years, taking us to January 2015, is not enough time to install emissions controls; mainly scrubbers, but also baghouses or selective catalytic reduction (SCR) technology. There is also not enough time to replace coal capacity with natural gas combined-cycle units. Our experience installing scrubbers on 7,800MW in the 2003-2010 period was that it took an average of five years from the start of the approval process to completion of the project.

*Argus:* What is AEP's timeline for adding more natural gas to the fleet? Might you accelerate this and retire coal faster?

**Braine:** We expect to move our coal-fired fleet – which makes up 65pc of our generating capacity – to 51pc by 2020. The remaining coal fleet would then be fully equipped with emissions controls to meet the expected regulations. Natural gas and renewables, such as hydro, wind and solar, together make up 30pc of our mix today.

AEP will increase that to 43pc by 2020, with most of it being natural gas. The remaining 7pc would be our nuclear generation.

We will need to add some new capacity by the middle of the decade to replace the coal plants we must retire.

*Argus:* What are the challenges AEP could face since it has facilities in both group 1 and group 2 states under CSAPR?

**Braine:** There are limits to trading between group 1 and group 2 states but this is not a big conundrum for us. Most of the  $SO_2$  in our system and the most difficult reduction requirements are in our eastern states, which are all in group 1. These group 1 states are hit hardest but are all within the same trading region. We do not have a problem with EPA splitting the new emissions regime into two regions. It does not affect our planning much. But it could trouble utilities that straddle group 1 and 2 because they may have wanted

to move surplus allowances to states in group 1 where SO<sub>2</sub> requirements are tighter.

Argus: Do you see liquid markets developing under CSAPR?

Braine: I do not think it will be a very liquid market in the long run. We will have a period during 2012 and 2013 where we can trade allowances more broadly now that EPA has just eliminated these assurance provisions. But once you reach 2014 you will have assurance provisions that will heavily penalize any "excess" trading (i.e. above the assurance limits) across state lines. The assurance provisions established effectively limit net annual purchases to only 18pc for  $SO_2$  and  $NO_x$  above the budgets of the states. If you look at the size of the SO<sub>2</sub> allowance budget for example – which is down to only about 2.1 million short tons across all the CSAPR states - this translates into only a small net amount of allowances that are likely to be traded in a year. Also, by 2014 SO<sub>2</sub> and NO<sub>x</sub> emissions will be very constrained. In a market where almost all coal plants have to have the maximum controls such as scrubbers and SCRs to comply, there will not be many surplus tons to trade. So there will probably be some trading activity under CSAPR, particularly in the near term, and it will pick up more from today's anemic levels. But it will never be as liquid a market as under the acid rain program or the Clean Air Interstate Rule (CAIR).

*Argus:* What effect would a stay of the CSAPR rule have on the industry?

**Braine:** It is hard to project what would happen if there is a stay of the rule. Most petitioners requesting a stay have asked the court to simply continue the CAIR program while the rule is being stayed. That would give emitters time to make the reductions going forward and assure continued environmental improvements. Though a stay would be helpful, the industry's most urgent need is more time for compliance under CSAPR. The major requirements of this rule would require scrubbers by 2014, or in just a little over two years, which is not feasible.

*Argus:* Is AEP concerned that if the court overturns the CSAPR rule, the next step would be command and control by EPA?

**Braine:** In theory EPA could be forced to require command and control if the court says it does not like an emissions trading system under CSAPR. However, it would more likely overturn the rule for other reasons such as the inadequate compliance timeframes or the degree of stringency of the rules.

### September eastern exports rise

Coal exports from five of the major eastern US terminals jumped 25pc in September from the same month last year, according to a survey conducted by *Argus*.

Export shipments totaled 4.49mn short tons (4.08mn metric tonnes) last month, up from 3.59mn last year from Norfolk Southern's Lamberts Point terminal, Kinder Morgan's Pier IX and Dominion Terminal Associates (DTA) in Hampton Roads, Virginia, the McDuffie Terminal in Mobile, Alabama, and the Chesapeake Bay Terminals in Baltimore.

Export volumes grew on the year from every Virginia terminal except DTA, where exports fell to 600,888st from 984,324st in September 2010.

### Peabody posts strong profit

Peabody Energy's US coal shipments climbed in the third quarter from last year as flooding subsided in the west and midwest, allowing the producer to achieve record revenues despite lower sales volumes from Australia.

Higher sales realizations and increased US shipments pushed Peabody revenues up 9pc on the year to a record \$2.04bn, helping third-quarter profit increase 22pc to \$274.1mn.

The earnings report came as ArcelorMittal said it is selling its share of a joint venture with Peabody to acquire Macarthur Coal, a day after the two companies obtained majority control of the Australian coking coal producer.

### **AEP coal generation stagnates**

Net generation from American Electric Power's (AEP) coal fleet was flat in the third quarter from last year, while output from natural gas jumped 17pc, a company executive said this week.

"Our east and west natural gas fleets experienced similar percentage gains quarter on quarter, with the east combined-cycle fleet outpacing our eastern [peaking units]," AEP chief financial officer Brian Tierney said on a third-quarter earnings call.

Natural gas markets slipped throughout much of the third quarter, with prompt-month Henry Hub futures falling from more than \$4.50/ mmBtu in early August to just above \$3.60/mmBtu in late September. In addition to more competitive gas prices, AEP said its average coal costs this year are well below current market levels.

## **Cloud Peak keeps view steady**

Cloud Peak Energy raised the midpoint of its expected coal production this year despite lower volumes in the third quarter, the company said this week.

The Powder River basin coal producer forecasts full-year production of 94mn-95.5mn short tons (85mn-86.6mn metric tonnes) compared with prior guidance for 93mn-96mn st, Cloud Peak said in reporting thirdquarter earnings.

"Flooding in the midwest affected railroad performance from May to September. However, by late September the railroads' performance had returned to normal, which has allowed us to improve our full-year guidance," chief executive Colin Marshall said.

### **Consol sees record quarter**

Strong coking coal prices helped Consol Energy achieve record thirdquarter revenue despite an 11pc drop in thermal coal shipments, the company said this week.

A 47pc jump in metallurgical sales volumes, as well as higher prices, helped push total revenue to \$1.4bn, from \$1.3bn in third-quarter 2010. Thermal coal prices also increased, providing a buffer to the drop in demand. Profit more than doubled to \$167.3mn from \$75.4mn last year.

### **Demand boosts Capesize rates**

Capesize freight rates are moving up again after plateauing last week with iron ore and coal demand still strong and congestion starting to build at ports.

There have been concerns that the Capesize rate rally would run out of steam after Chinese steel demand fell and concerns arose over European steel demand given the sovereign debt crisis, which it was thought would curb iron ore imports.

But so far, trade volumes have been strong enough to underpin rates and there are signs that Japan has been more active in the market as it recovers from March's earthquake and tsunami.

## PVR eyes expanding assets

Penn Virginia Resources (PVR) is seeking to expand its coal assets in Northern Appalachia and the Illinois basin to diversify its reserve base and reach a different customer set, company officials said this week.

PVR sees "significant growth" opportunities in both regions, but will also consider more acquisitions in Central Appalachia, especially if they complement existing assets in the basin, chief executive Bill Shea said during PVR's third-quarter earnings call.

### Southern seeks gas pipelines

Natural gas transportation in the US is "full" and pipeline infrastructure would need to expand to support Southern Co. switching more of its fuel consumption away from coal, company executives said this week.

Southern has boosted its share of natural gas-fueled power to more than 30pc, from 10pc four years ago, and plans to add 2,500MW of gas at its McDonald facility in the next two years.

# PRB a weak spot in broadly stable market

Physical markets tumbled again this week for typical Powder River (PRB) basin coal specifications, sending prices to their lowest level in two months as generators seek other coals from the region with even lower sulfur.

Other US markets were mostly flat on continued uncertainty about the Environmental Protection Agency's (EPA) Cross-State Air Pollution Rule, which has weighed on liquidity.

Coal producers reporting third-quarter earnings this week admitted buyers are holding back on new purchases until they are more fully aware of compliance obligations. EPA is accepting comments through the end of November on proposed revisions to the rule that could alter SO<sub>2</sub> and NO<sub>X</sub> emissions trading programs for utilities.

"[US generators] are skittish about coming into the marketplace at this point in time," Consol Energy chief financial officer Bill Lyons said on the company's earnings call yesterday.

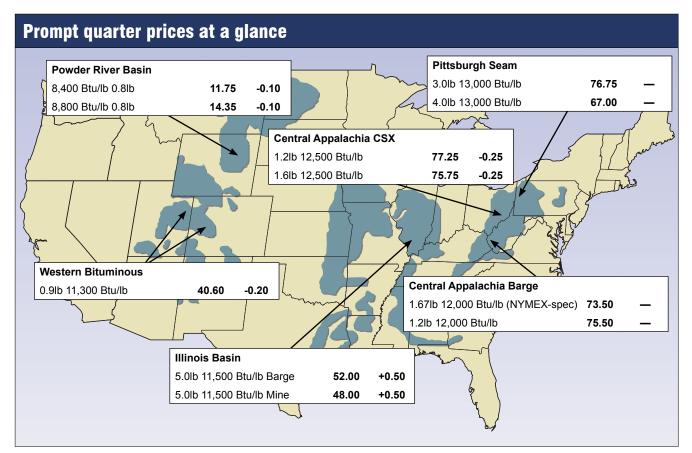
Prices for standard PRB coal with 8,800 Btu/lb, 0.8lb SO<sub>2</sub>/mmBtu had climbed following the rule's release in July as a result of the coal's lower sulfur content, but markets have slumped in the past two weeks as generators turn their attention to the region's ultra-low sulfur specification.

Physical PRB 8,800 Btu/lb coal with 0.8lb SO<sub>2</sub> fell this week to \$14.35/short ton for the prompt quarter, off 10¢ from last week and its lowest level since 26 August. Losses were even heavier at the back of the curve, with the 2012 strip shedding 40¢ this week to \$14.60/st after losing 45¢ last week.

Central and Northern Appalachian prices were better supported, with increased export shipments and higher coking coal sales counterbalancing the slow domestic market. CSX-originated coal from Central Appalachia with 12,500 Btu/lb, 6lb SO<sub>2</sub> dipped by 25¢ for the prompt quarter to \$75.75/st but calendar 2012 was flat at \$76.75/ st. Pittsburgh seam coals were also steady, with producers saying this week that most of their production goes to scrubbed plants that will be less likely to close down under the cross-state rule. Pitt seam coal with 13,000 Btu/ lb, 4lb SO2 was flat for the first quarter of 2012 at \$67/st.

Along with the cross-state rule, persistently low natural markets are taking a toll on coal demand and prices. On earnings calls this week, Southern Co. and American Electric Power (AEP) said their reliance on natural gas has grown at the expense of coal.

Coal's share of Southern Co. generation has fallen to *continued on p6* 



around 50pc from 70pc in 2007, a utility official said on a 26 October earnings call. AEP said its coal generation in the third quarter was flat with last year while net generation from gas jumped 17pc.

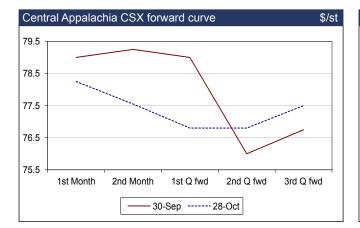
Those fundamentals were felt by the railroads, many of which reported lower domestic coal volumes in the third quarter compared with last year.

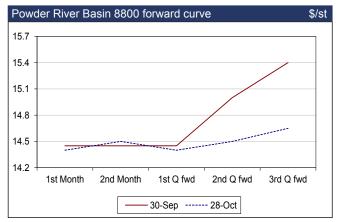
"Competition from natural gas and reduced electrical demand impacted coal burn across our network," Norfolk Southern chief marketing officer Don Seale said this week.

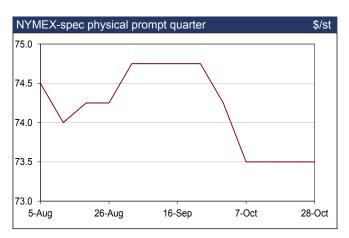
The boost to US gas supply from shale production has kept prompt Henry Hub futures pinned firmly below \$4/ mmBtu, encouraging generators to run more gas in place of coal.

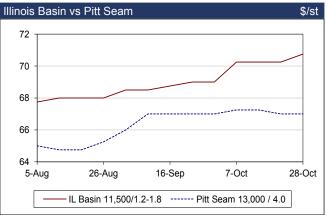
The US Energy Information Administration (EIA) reported yesterday that US gas stockpiles grew by 92 Bcf (2.6bn m<sup>3</sup>) in the week ended 21 October, the seventh consecutive week of larger-than-average injections. The gain was nearly twice the size of the five-year average injection for the week of 47 Bcf and bigger than the 74 Bcf injection during the same week last year, according to EIA data. Analysts surveyed by *Argus* had expected an increase of 88 Bcf.

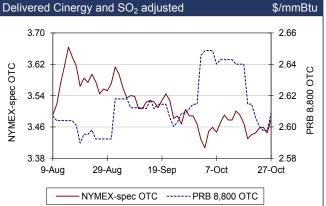
US stockpiles for the week stood at 3.716 Tcf — 0.7pc below the same week last year and 4.4pc above the five-year average, according to the EIA.

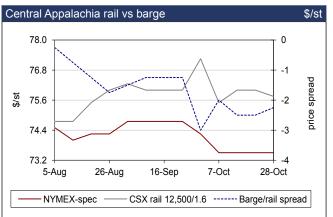












# International Coal Markets Swaps rise on firmer physical

Prompt-month coal swaps rose by around 55¢/metric tonne on the European over-the-counter market, on firmer physical bids and offers and a flurry of fresh buying.

In the physical market, a December 50,000mt cargo was bid on screen at \$120.25/mt des Amsterdam or Rotterdam (AR), with an offer marked against the bid at \$123.75/mt des AR, boosting coal swaps.

On API 2, front-month November traded up to an intraday high of \$119/mt, before falling to support at around \$118.50/mt. The contract settled at \$118.95/mt, up by 55¢/mt on the previous day and its highest close for more than two weeks.

The fourth-quarter 2011 contract tracked a smoother trajectory, increasing by 40 e/mt to close at \$118.50/mt. The gains were heavier along the curve, with the second-quarter 2012 contract settling at \$119.30/mt, up by 70e/mt, and the third-quarter 2012 contract finishing the session at \$120.40/mt, up 80e/mt.

At the back, the spread between calendar 2012 and 2013 was marked at a discount of 4.75/mt, up by 75¢/mt on the week. But the calendar 2014 contract notched the day's biggest gain, closing at 129.25/mt, up by 2.25/mt.

### **Fuel Markets**

# Supply, cool weather dents gas

US natural gas futures slipped this week on robust domestic production, growing inventories and forecasts for mild seasonal weather.

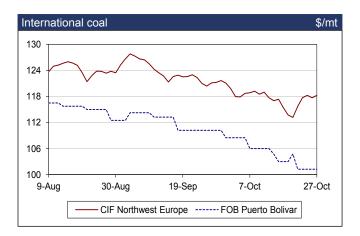
NYMEX gas for November delivery fell by 10.5¢/mmBtu, or 2.9pc since 21 October, settling yesterday at \$3.524/mmBtu. The November contract, which expired yesterday, finished lower in three of those four sessions.

Federal forecasters predicted near-normal temperatures across most of the midcontinent, the northeast and the mid-Atlantic from 1-5 November, according to the National Weather Service. Above-normal temperatures are expected across parts of the plains states and the midwest for 3-9 November.

The mild weather could bolster US stockpiles, which received a lift this month from moderate temperatures and record-high domestic production. The latest build signaled that production is significantly outstripping demand. US injections historically begin tapering off toward the end of October as colder weather begins lifting demand for the heating fuel.

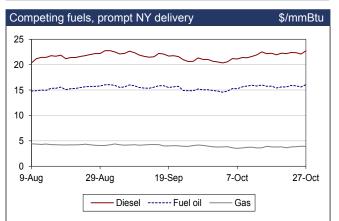
Cold weather this week helped support spot prices. Dailies at Henry Hub climbed to an average of \$3.59/mmBtu yesterday, up from \$3.545/mmBtu on 21 October, while gas at Transco zone 6 reached \$4.01/mmBtu yesterday, up by 35¢/ mmBtu over that same period.

Delivered coal equivalents										
	Price	Change	\$/mmBtu							
Bolivar 11,300 / <1% delivered to										
ARA	122.05	2.10	4.90							
US Gulf Coast	113.35	2.10	4.55							
US East Coast	121.10	2.40	4.86							
CSX 12,500 / 1.6 delivered to										
ARA	110.55	0.25	4.01							
US East Coast	101.14	-0.27	3.67							
6000 kcal / 1% CIF ARA	119.59	3.87	4.94							



Natural gas											
	Latest week	Year-ago	5-year average	Change vs avg.							
Storage (Bcf)	3,716	3,744	3,558	158							
Drilling (rigs)	934	967	1,127	-193							
Sources: US EIA, Baker Hughes Inc.											

Oil products s	'000 b/d		
	Latest week	Year-ago	% change vs year-ago
Fuel oil	263	335	-21.5%
Distillates	4,249	4,183	1.6%
Source: US EIA			



### **Emissions Markets**

# Markets mixed in quiet week

The California greenhouse gas market edged lower this week as regulators submitted cap-and-trade rules for final review, while the Cross-State Air Pollution Rule markets ended mixed.

Trade was thin this week as many market participants abandoned their desks for the Environmental Markets Association Conference in Los Angeles.

Trade dried up in the California Carbon Allowances (CCA) market even after state regulators finalized the rules for the program. Prices dropped \$18.25/metric tonne mid-week before recovering to \$18.50 to close the week.

It is still unclear what the supply of offsets will be in the California market, but state regulators have projected that supply will exceed demand in the early years.

Vintage 2012 cross-state ozone season  $NO_x$  allowances fell \$200/short ton this week to close at \$1,800/st today. Participants said offers dropped to meet bids in a short run of activity. Vintage 2012 cross-state ozone season  $NO_x$  prices also moved lower in a quiet week.

Utilities in New Jersey sold all 32,625 of their reporting year 2012 solar renewable energy certificates (SRECs) at \$227.03/MWh at an auction today. They also sold 1,778 reporting year 2011 SRECs at \$669.01.

### **Power Markets**

# Dailies post modest gains

Coal consuming regions of the US saw modest power price movements this week, but off-peak prices moved opposite to peak at some hubs.

Off-peak blocks in the inland southwest US moved up against downward moves in the peak shape as shoulderseason volatility tightened the overnight supply-demand picture.

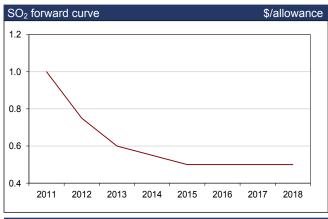
The weekly light-load average at Mead was up 8pc on the week to \$25.70/MWh. Palo Verde moved up by 6pc to \$25.45/MWh. Peak at those hubs was up 6-8pc to \$33 and \$34.50, respectively.

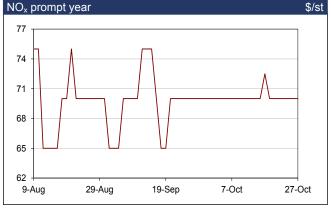
Peak prices in the Electric Reliability Council of Texas (ERCOT) South and Houston hubs levered prices slightly higher at North on a bout of cooling demand, but lost steam as the week progressed. The *Argus* ERCOT North peak index ended the week at \$28.50/MWh.

Cinergy edged down around the clock to a \$33 weekly average, but AEP Dayton increased by 5pc at \$38/MWh.

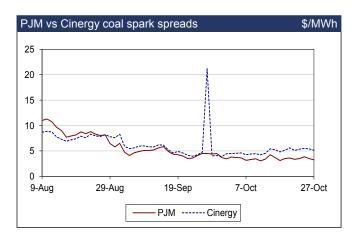
PJM West's peak day-ahead price rose by 12pc over the past week on higher heat load. The *Argus*-assessed peak daily price ended today at \$45.85/MWh. Coal generators' margins improved on the back of the higher power prices.

The peak spark spread for a 10 heat rate coal plant selling





Power prices										
	Prompt month	Change on week	Change on year	Prompt season	Change on week	Change on year				
Cinergy	35.50	0.25	3.25	42.25	0.20	6.00				
РЈМ	43.50	-0.10	3.75	54.35	0.00	8.10				
New England	47.50	-0.50	6.50	71.30	0.15	18.05				
New York A	38.90	0.40	8.90	46.00	0.40	6.00				
N. Illinois	34.10	0.10	2.35	43.10	0.00	6.10				
Palo Verde	31.75	0.70	2.25	32.70	-0.15	0.95				



### Transportation

# Volumes steady despite PRB floods

US coal volumes were mostly flat in the latest week ended on 22 October at 134,178 carloads, according to the Association of American Railroads.

The major Class I railroads hauled 134,235 coal carloads in the year-ago week.

For 2011 coal traffic is down 0.5pc at 5.43mn carloads as a result of the flooding that hit western Powder River basin traffic.

BNSF's network was more vulnerable and took the longest to recover, but is now improving. Still, a solid year-ago performance kept its gains mostly unchanged in the latest week at 0.15pc above 2010 at 48,257 carloads.

Union Pacific coal carloads rose 1pc to 40,990 carloads. The railroad said the shoulder season build by utilities has been limited by planned and unplanned utility outages and Powder River basin mine issues.

Making room on the rails for coal trains is a poor harvest in the west. Overall US grain shipments fell 26pc on the year, with Union Pacific grain traffic down by 27pc and BNSF grain lower by 29pc.

CSX was the laggard for coal shipments in the week with its volumes falling 10.5pc to 26,005 carloads from 29,065 carloads a year prior.

### **Fundamentals**

# **Coal output inches lower**

Total US coal production for the week ended 22 October fell to 21.2mn short tons (19.2mn metric tonnes), 0.5pc lower than the 21.3mn st mined in the year-ago week, according to US Energy Information Administration data.

Powder River basin producer Wyoming is partly responsible for the decrease. The state's coal output decreased to 8.6mn st in the latest week, off 3.3pc from 8.9mn st a year prior. Production in Montana fell 5pc to 934,000st from 982,000st a year prior.

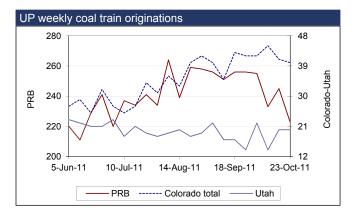
Output from West Virginia rose 4pc to 2.7mn st, while Kentucky's production grew by 3pc and Pennsylvania produced 1pc more coal than in the same time last year.

Year-to-date production stands at 872.1mn st, down 0.5pc from 876.2mn st through the same period of 2010. The Powder River basin has contributed to much of the decline, with Wyoming production down by 2.6pc and Montana off 8.2pc year to date. Colorado output has gained by 8.1pc while Utah's production is up by 1.4pc.

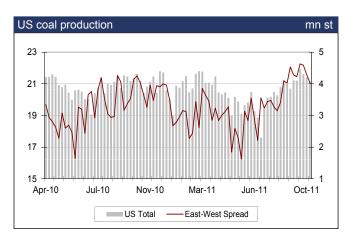
Production from the Illinois basin is up 5.2pc at 89.7mn st from 85.2mn st in 2010. Kentucky's total production rose by 2.2pc to 87.3mn st from 85.4mn st in the comparable year-ago period.

Net barge movement on Appalachian rivers										
River - Lock: Latest: Prior week pct change year ag										
Monongahela - Lock 4	91,400	95,800	-4.6%	96,900						
Kanawha - Marmet	301,576	198,150	52.2%	237,000						
Ohio - BSR Net Tonnage	483,685	376,784	28.4%	488,344						

Coal train speeds: Four-week average											
(in mph)	Week ended 21-Oct-11	Week ended 22-Oct-10	Change	% Change							
BNSF	20.0	20.0	0.0	0.0%							
CSX	17.1	17.0	0.1	0.6%							
Norfolk Southern	15.7	14.9	0.8	5.4%							
Union Pacific	24.0	25.4	-1.4	-5.5%							
Source: AAR											



Genscape weekly coal burn index st												
Week ending: 40843		Prior week % change		Year-ago	% change							
National	16.72mn	16.1mn	5.0%	18.91mn	-12.0%							
East	14.26mn	13.62mn	4.0%	16.83mn	-15.0%							
West	2.31mn	2.23mn	4.0%	2.47mn	-6.0%							
Figures re	present estim	ated coal cons	umption by a	ll US power p	lants.							
	Source: Genscape. For more info, see http:// www.genscape.com/coalmethod.shtml											



# Argus Coal Weekly - Emissions Adjusted Physical Coal

28	October	2011
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Prompt quarter em	issions-a	djusted c	oal prices	;					\$/st
Prices do not include f	reight		SO <sub>2</sub>			SO <sub>2</sub> + NO <sub>x</sub>			
	Btu/lb	Ib SO <sub>2</sub>	US	Cinergy/ECAR	Southern/SERC	New England	N. Illinois/MAIN	PJM	New York
Central Appalachia				·	·	·			
Nymex-spec Barge	12,000	1%	73.52	73.52	73.52	73.52	73.52	73.52	73.52
Big Sandy Barge	12,000	1.2	75.51	75.51	75.51	75.51	75.51	75.51	75.51
Big Sandy/CSX Rail	12,500	1.2	77.26	77.26	77.26	77.26	77.26	77.26	77.26
Big Sandy/CSX Rail	12,500	1.6	75.77	75.77	75.77	75.77	75.77	75.77	75.77
Big Sandy/CSX Rail	12,500	2.0	73.77	73.77	73.77	73.77	73.77	73.77	73.77
Powder River Basin									
FOB Mine/Rail	8,800	0.8	14.36	14.36	14.36	14.36	14.36	14.36	14.36
FOB Mine/Rail	8,400	0.8	11.76	11.76	11.76	11.76	11.76	11.76	11.76
Illinois Basin									
Illinois/Indiana Mine	11,500	5.0	48.04	48.04	48.04	48.04	48.04	48.04	48.04
Illinois/Indiana Mine	11,500	1.2/1.8	70.76	70.76	70.76	70.76	70.76	70.76	70.76
Illinois/Indiana Mine	11,000	>6.0	42.30	42.30	42.30	42.30	42.30	42.30	42.30
Colorado/Utah									
Western Bituminous	11,300	0.9	40.61	40.61	40.61	40.61	40.61	40.61	40.61
Uinta Basin, Colorado	11,700	0.9	44.81	44.81	44.81	44.81	44.81	44.81	44.81
Uinta Basin, Utah	11,700	0.9	41.31	41.31	41.31	41.31	41.31	41.31	41.31
Pittsburgh Seam									
FOB Mine	13,000	3.0	76.78	76.78	76.78	76.78	76.78	76.78	76.78
FOB Mine	13,000	4.0	67.04	67.04	67.04	67.04	67.04	67.04	67.04
FOB Mine	12,500	6.0	57.06	57.06	57.06	57.06	57.06	57.06	57.06

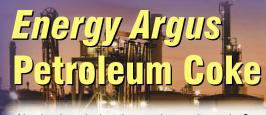
Prompt quarter em	Prompt quarter emissions adjusted coal prices \$/mmBtu									
Prices do not include fi	reight		SO <sub>2</sub>			SO <sub>2</sub> + NO <sub>x</sub>				
	Btu/lb	Ib SO <sub>2</sub>	US	Cinergy/ECAR	Southern/SERC	New England	N. Illinois/MAIN	РЈМ	New York	
Central Appalachia										
Nymex-spec Barge	12,000	1%	3.06	3.06	3.06	3.06	3.06	3.06	3.06	
Big Sandy Barge	12,000	1.2	3.15	3.15	3.15	3.15	3.15	3.15	3.15	
Big Sandy/CSX Rail	12,500	1.2	3.09	3.09	3.09	3.09	3.09	3.09	3.09	
Big Sandy/CSX Rail	12,500	1.6	3.03	3.03	3.03	3.03	3.03	3.03	3.03	
Big Sandy/CSX Rail	12,500	2.0	2.95	2.95	2.95	2.95	2.95	2.95	2.95	
Powder River Basin										
FOB Mine/Rail	8,800	0.8	0.82	0.82	0.82	0.82	0.82	0.82	0.82	
FOB Mine/Rail	8,400	0.8	0.70	0.70	0.70	0.70	0.70	0.70	0.70	
Illinois Basin										
Illinois/Indiana Mine	11,500	5.0	2.09	2.09	2.09	2.09	2.09	2.09	2.09	
Illinois/Indiana Mine	11,500	1.2/1.8	3.08	3.08	3.08	3.08	3.08	3.08	3.08	
Illinois/Indiana Mine	11,000	>6.0	1.92	1.92	1.92	1.92	1.92	1.92	1.92	
Colorado/Utah										
Western Bituminous	11,300	0.9	1.80	1.80	1.80	1.80	1.80	1.80	1.80	
Uinta Basin, Colorado	11,700	0.9	1.91	1.91	1.91	1.91	1.91	1.91	1.91	
Uinta Basin, Utah	11,700	0.9	1.77	1.77	1.77	1.77	1.77	1.77	1.77	
Pittsburgh Seam										
FOB Mine	13,000	3.0	2.95	2.95	2.95	2.95	2.95	2.95	2.95	
FOB Mine	13,000	4.0	2.58	2.58	2.58	2.58	2.58	2.58	2.58	
FOB Mine	12,500	6.0	2.28	2.28	2.28	2.28	2.28	2.28	2.28	

### Coal market averages

Over-the-counter market													
\$/st				Pro	mpt month		Pro	mpt quarter					
Location	Basis	Btu/lb	SO2	October MTD	September	Q3 2011	October MTD	September	Q3 2011				
NYMEX-spec CAPP	FOB Barge	12,000	1%	73.40	74.82	75.95	73.54	74.88	76.09				
CSX	FOB Rail	12,500	1.6	78.62	77.28	77.65	76.09	77.08	77.60				
Powder River Basin	FOB Rail	8,800	0.8	14.38	14.24	14.14	14.70	14.40	14.37				
Powder River Basin	FOB Rail	8,400	0.8	11.71	11.62	11.50	11.85	11.62	11.67				

#### **Physical market**

\$/st				Prompt quarter			Second quarter forward		
Location	Basis	Btu/lb	SO2	October MTD	September	Q3 2011	October MTD	September	Q3 2011
Central Appalachia		·	<u>.</u>						
NYMEX-spec Barge	FOB Barge	12,000	1%	73.50	74.65	74.95	74.25	77.10	77.63
Big Sandy Barge	FOB Barge	12,000	1.2	75.50	76.15	76.34	76.25	77.10	77.63
Big Sandy/CSX	FOB Rail	12,500	1.2	77.19	77.80	77.11	77.63	77.85	78.09
Big Sandy/CSX	FOB Rail	12,500	1.6	75.81	76.30	75.77	76.25	76.30	76.73
Big Sandy/CSX	FOB Rail	12,500	2.0	73.81	74.80	74.27	74.25	74.75	75.38
Powder River Basin									
	FOB Mine	8,800	0.8	14.68	14.44	14.36	14.93	14.99	11.54
	FOB Mine	8,400	0.8	11.88	11.41	11.54	12.18	12.06	11.95
Illinois Basin									
Ohio R / KY Barge	FOB Barge	11,500	5.0	51.63	49.85	49.79	52.06	50.80	50.57
Illinois/Indiana Mine	FOB Mine	11,500	5.0	47.63	45.85	45.79	48.06	46.80	46.57
Illinois/Indiana Mine	FOB Mine	11,500	1.2-1.8	70.38	68.75	68.32	70.56	69.35	68.79
Ohio R / KY Barge	FOB Barge	11,800	2.5-3.0	56.38	54.75	54.55	56.63	55.55	55.25
Illinois/Indiana Mine	FOB Mine	11,000	>6.0	42.06	41.50	41.34	42.38	42.00	41.82
Ohio R / KY Barge	FOB Barge	11,000	6.0	46.06	45.25	45.13	46.38	46.00	45.82
Colorado/Utah		·		·			-	•	
Western Bituminous	FOB Mine	11,300	0.9	41.09	39.82	39.43	41.26	40.40	40.04
Uinta Basin, Colorado	FOB Mine	11,700	0.9	44.80	42.30	41.42	44.90	42.62	41.71
Uinta Basin, Utah	FOB Mine	11,700	0.9	41.38	40.82	41.81	41.68	41.78	43.11
Pittsburgh Seam									-
	FOB Mine	13,000	3.0	77.00	76.60	75.21	77.25	76.75	75.57
	FOB Mine	13,000	4.0	67.13	66.80	65.71	67.38	66.95	66.20
	FOB Mine	12,500	6.0	56.63	56.40	55.68	57.75	56.45	55.77



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