

The U.S. Coal Industry

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Recent M&A Values

Major Coal M&A Transactions: Private Met Coal Producers Getting Gobbled Up

Date	Acquiree	Acquiror	Purchase Price	Reserves	Reserve Split	Production	Implied \$/Ton Value
June 2007	PinnOak Resources	Cliffs Natural Resources	\$610 million	140 million tons	---	3.9 million tons	\$4.36
June 2007	AMVEST	CONSOL Energy	\$335 million	200 million tons	---	4.9 million tons	\$1.68
April 2008	Magnum Coal	Patriot Coal	\$709 million	1.9 billion tons	---	16.1 million tons	\$0.37
June 2008	Mid Vol Coal Group	ArcelorMittal (India)	Undisclosed	85 million tons	---	1.5 million tons	---
July 2008	Concept Group	ArcelorMittal (India)	Undisclosed	57 million tons	---	800,000 tons	---
August 2008	PBS Coals	Severstal (Russia)	\$1.0 billion	422 million tons	---	2.4 million tons	\$2.37
April 2009	Bluestone	Mechel OAO (Russia)	\$436 million*	725 million tons	---	3.1 million tons	\$1.96
April 2010	United Coal Company	Metinvest (Ukraine)	Not Disclosed	160 million tons	82% met	5.6 million tons	---
March 2010	Trinity Coal Corp.	Essar Group (India)	\$600 million	200 million tons	50% met	8.9 million tons	\$3.00
March 2010	Cumberland Resources	Massey Energy	\$960 million**	416 million tons	52% met	7.8 million tons	\$2.31
July 2010	INR Energy	Cliffs Natural Resources	\$757 million	119 million tons	57% met	1.4 million tons	\$6.36
December 2010	Western Coal	Walter Energy	\$3.3 billion	209 million tons	84% met	6.7 million tons	\$15.82
January 2011	Massey Energy	Alpha Natural Resources	\$8.5 billion	2,800 million tons	46% met	37.1 million tons	\$2.99

*Excludes preferred shares (\$986 million beginning value)

**\$640 million cash and \$320 million stock

Source: Company reports; Reuters

Current Themes: Met Market

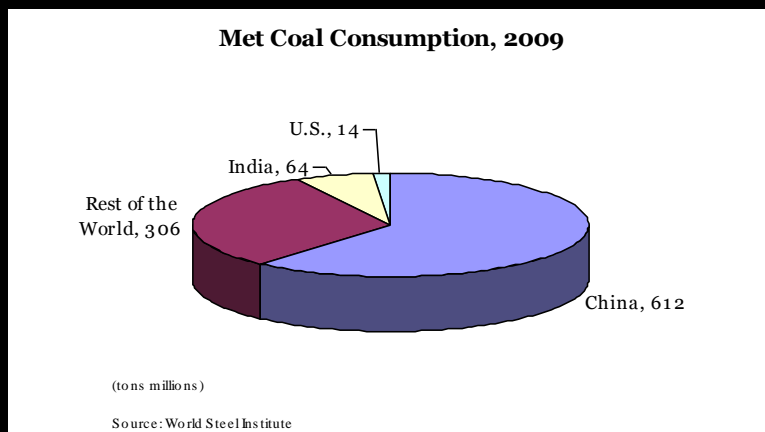
Metallurgical coal market (~7% of U.S. coal supply)

- Met coal prices continue to surge. According to Platts, the spot price for highest quality low-vol met coal was \$343/mt FOB Australia as of January 31. The Q1'11 met coal settlement was reached in late November at \$225/mt, up from \$209/mt for Q4'10. We anticipate a Q2'11 settlement of \$300/mt+ (likely in late Feb./early Mar.).
- The recent flooding in Australia is far worse than in 2008, when the seaborne market lost ~8.5M tons of supply. The key from here is weather. The Australian rainy season runs through the end of March and the cyclone season through the end of April.
- There has been a sharp uptick in activity involving U.S. producers. While there is limited port space to accommodate a lot of spot buying in the near-term, U.S. producers are well-positioned to capture higher prices as the year progresses. We believe the met market is not only tight near-term, but longer term as well.

The Met Coal Market

- ❑ **What is met (coking) coal?** Coal suitable to make coke for the manufacturing of steel. Met coal typically has a high Btu and low ash content.

- ❑ **From most valuable to least, what are the different grades of met coal?**
 - ❑ **Low-vol:** <20% volatile matter (impurities that become gaseous at certain temperatures)
 - ❑ **Mid-vol:** 20-34% volatile matter
 - ❑ **High-vol:** 35%+ volatile matter (depending upon price, high vol also used as utility coal)
 - ❑ **PCI:** Suitable for direct injection into a blast furnace in pulverised state



*Coking coal represents only
~7% of total U.S. volumes*

World Met Coal Trade (Mt)

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010E</u>	<u>2011E</u>
Met coal imports							
Japan	57	58	54	57	46	53	57
EU	52	54	55	57	41	46	48
China	7	5	6	7	34	44	45
India	17	18	23	29	23	25	27
South Korea	21	20	23	24	15	22	25
Brazil	14	9	10	11	9	12	13
Taiwan	5	5	8	5	4	7	7
Other	39	41	48	46	39	37	37
World imports	211	210	227	236	211	246	259
Met coal exports							
Australia	125	124	138	135	135	159	162
U.S.	26	25	29	39	34	34	34
Canada	27	25	27	27	22	25	27
Russia	10	10	15	14	13	18	21
Other	24	26	18	21	7	10	15
World exports	211	210	227	236	211	246	259
Y/Y Growth		-0.7%	8.1%	4.0%	-10.6%	16.6%	5.3%

Source: ABARE, Australian commodities quarterly, December 2010

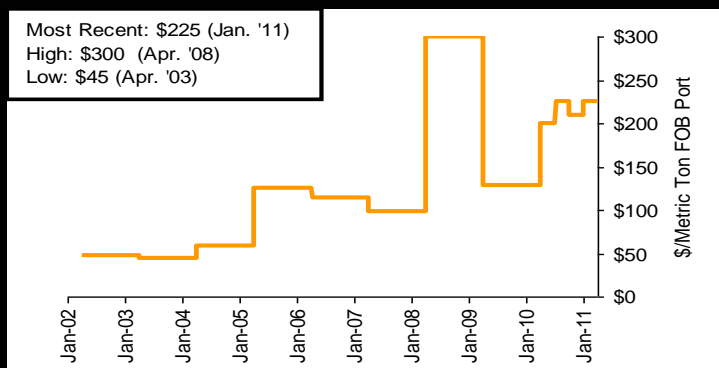
Met Coal Drivers & Prices

Key price drivers:

- Global steel production/demand/utilization expectations
- Chinese steel consumption: ~45% of the global total
- Potential for supply disruption (i.e. cyclones in Australia, mine collapses in Russia and the U.S.)
- Pace of Australian rail and port capacity additions, plus the development of major met reserves in Mozambique (Tete Moatize) and Mongolia (Tavan Tolgoi)

Seaborne High-Quality Hard Coking Coal Prices

(\$/mt FOB Port)



Period	(\$/mt FOB Port)
2002	\$47
2003	\$45
2004	\$58
2005	\$125
2006	\$115
2007	\$98
2008	\$300
2009	\$129
Apr-2010	\$200
Jul-2010	\$225
Oct-2010	\$209
Jan-2011	\$225

Note: Global benchmark price between the BHP Billiton-Mitsubishi Alliance (BMA) and Japanese steel producers for high-quality hard coking coal contracts for the Japanese fiscal year (4/1-3/31). HQHCC contracts settled on a quarterly basis beginning 4/1/10.

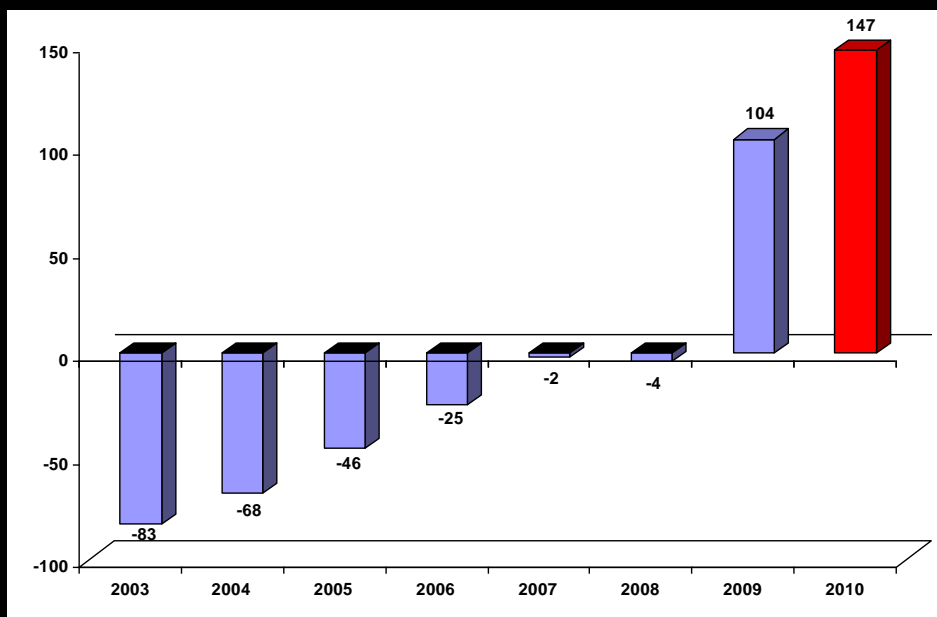
Source: Bloomberg, Reuters

Current Themes: China

China

- ❑ Net imports set another record in 2010.
- ❑ Chinese thermal coal prices have come off significantly with utility inventories at healthy levels.
- ❑ Following the massive upsurge in Australian met prices, Chinese steel mills remain comfortable to source their coal internally as the economics dictate.

Chinese Net Coal Imports
(millions of metric tons)

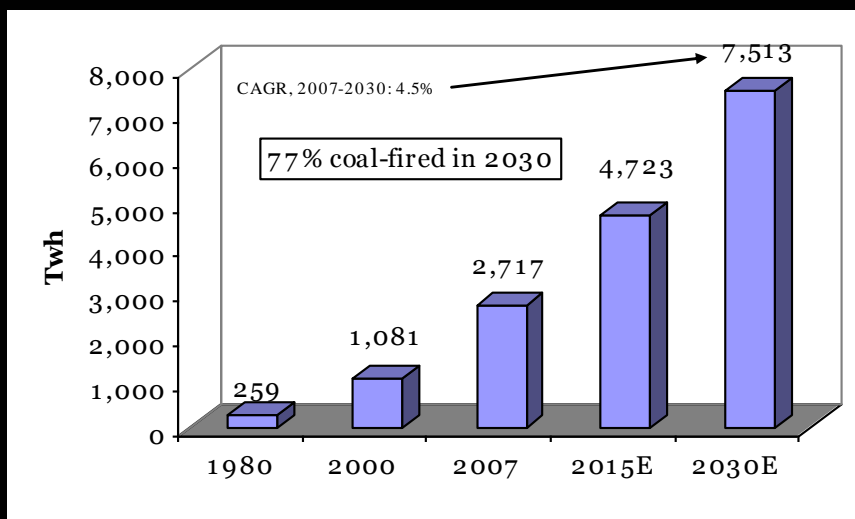


Source: China General Administration of Customs

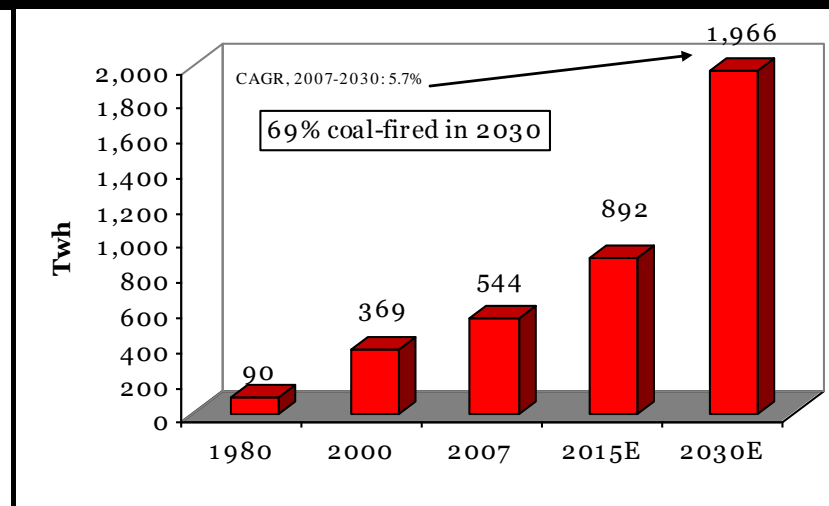
A Global Look: The Future

It's all about Asian demand.

CHINA



INDIA



Asia expected to represent 90% of long-term coal demand.

Source: EIA

U.S. Coal Exports/Imports

U.S. Coal Exports/Imports (in millions of short tons)

	<u>By Coal Type</u>												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010E	2011E	2012E
Coal Exports													
Met	33	25	22	22	27	29	28	32	43	37	55	56	58
Thermal	26	23	18	21	21	21	22	27	39	22	25	26	27
Total Coal Exports	58	49	40	43	48	50	50	59	82	59	80	82	85
Coal Imports													
Met	NA	NA	NA	NA	2	2	2	2	2	1	1	1	1
Thermal	NA	NA	NA	NA	25	29	35	35	33	22	18	19	22
Total Coal Imports	13	20	17	25	27	31	36	36	34	23	19	20	23
Net Exports (Imports)	46	29	23	18	21	19	13	23	47	37	61	62	62
	<u>By Destination/Origin</u>												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010E	2011E	2012E
Met Coal Exports													
Europe	20	15	12	12	12	15	15	18	26	20	NA	NA	NA
Brazil	5	4	4	3	3	3	4	6	6	7	NA	NA	NA
Canada	4	4	5	4	4	4	5	4	4	2	NA	NA	NA
China	0	0	0	0	0	0	0	0	0	1	NA	NA	NA
India	0	0	0	0	0	1	1	1	2	2	NA	NA	NA
South Korea	1	0	0	0	0	1	0	0	1	2	NA	NA	NA
All Other	3	2	2	3	7	3	2	3	5	3	NA	NA	NA
Total Met Coal Exports	33	25	22	22	27	29	28	32	43	37	55	56	58
Thermal Coal Exports													
Europe	5	6	4	3	3	3	6	9	15	10	NA	NA	NA
Canada	15	14	12	17	14	15	15	15	19	8	NA	NA	NA
All Other	6	3	2	1	4	3	1	4	5	3	NA	NA	NA
Total Thermal Coal Exports	26	23	18	21	21	21	22	27	39	22	25	26	27
Coal Imports													
Colombia	8	11	9	15	17	21	25	27	26	18	NA	NA	NA
Venezuela	2	3	3	5	4	4	4	3	2	1	NA	NA	NA
All Other	3	5	4	5	6	6	7	6	6	4	NA	NA	NA
Total Coal Imports	13	20	17	25	27	31	36	36	34	23	19	20	23

Source: EIA

U.S. Coal Export Capacity

Key points:

- "Actual" U.S. coal export (seaborne) capacity is ~105-110M tons, about 35-40M tons below "nameplate" capacity due to various restricting factors and coastwise movements
- Recent export constraint has been poor rail service, not a lack of terminal capacity
- Met coal has and should continue to dominate terminal capacity
- CAPP thermal coal still "out of the money" at current API2 price levels
 - If API2 arb opens, NAPP coal will be first to move (higher BTU content & Europe is "scrubbed")

U.S. Coal Export Terminal Capacity

(in millions of short tons)

	<u>Actual</u>	<u>Nameplate</u>
Norfolk		
Lamberts Point	40	40
DTA	19	22
Pier IX	10	12
Total Norfolk	69	74
Baltimore		
CNX Terminal (CONSOL)	10	12
Chesapeake Bay (CSX)	5	6
Total Baltimore	15	18
New Orleans		
United Marine	17	20
IMT	6	8
IC RailMarine	4	4
Total New Orleans	27	32
Mobile (3 berths)	10	20
<i>less: Coastwise movements</i>	15	
Total Capacity	105	144

U.S. Coal Exports/Imports (in millions of short tons)

By Port

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010E	2011E	2012E
Coal Exports													
Norfolk	22	17	12	13	14	15	15	22	30	28	NA	NA	NA
Baltimore	6	5	4	3	5	5	6	8	11	7	NA	NA	NA
Mobile	6	4	4	4	6	7	6	7	8	8	NA	NA	NA
New Orleans	1	1	1	1	3	2	2	4	9	5	NA	NA	NA
Detroit	1	1	0	3	6	9	14	13	17	6	NA	NA	NA
Cleveland	7	11	13	10	3	3	3	2	3	2	NA	NA	NA
All Other	15	9	5	8	10	9	3	3	4	3	NA	NA	NA
Total Coal Exports	58	49	40	43	48	50	50	59	82	59	80	82	85
Coal Imports													
Mobile	5	7	6	8	9	10	12	13	11	7	NA	NA	NA
Tampa	1	2	1	2	3	2	3	4	5	3	NA	NA	NA
Boston	2	2	2	4	4	5	5	5	5	4	NA	NA	NA
All Other	5	9	8	10	12	13	16	15	13	9	NA	NA	NA
Total Coal Imports	13	20	17	25	27	30	36	36	34	23	80	82	85

Sources: T. Parker Host and EIA

Current Themes: Utility Market

Utility (thermal/steam) coal market (~93% of U.S. coal supply)

- Eastern coal prices have fallen sharply the last several weeks. PRB prices have remained relatively flat.
- Eastern inventories have come down considerably, but still remain well above long-term averages. The lack of port capacity to move thermal out of Hampton Roads when the arb is open remains an important issue.
- Costs in the eastern U.S. are under significant upward pressure due to stricter enforcement of mine regulations by MSHA. Productivity is declining rapidly. Even so, CAPP and NAPP production has been better than anticipated, largely due to met.

New U.S. Coal Fired Generation

Current Coal-Fired Capacity Projects
Annual Change

General Status	Number of Plants			Capacity (MW)		
	January 2009	January 2010	Net Change	January 2009	January 2010	Net Change
PROGRESSING						
Under Construction	28	22	-6	16,319	13,755	-2,564
Near Construction	7	1	-6	2,812	320	-2,492
Permitted	13	8	-5	7,000	3,280	-3,720
Sub-total	48	31	-17	26,131	17,355	-8,776
UNCERTAIN POTENTIAL & TIMING						
Announced (early stages of development)	47	46	-1	31,869	26,233	-5,636
TOTAL Operational this Period	95	77	-18	58,000	43,588	-14,412
TOTAL with Operational			-10			-11,194

Definitions:

Under construction: Project is under construction.

Near construction: Project has been approved, and majority of all permits have been obtained.

Permitted: In the permitting phase. Two or more permits approved or fuel or power contracts negotiated.

Announced: Early stages of development to filing for permits.

Source: NETL

At least 40 GW of old, inefficient coal-fired generation at risk

Every 10 GW = 32 million tons of annual coal demand

AEP, TVA, Duke, Progress: lots of potential retirements

The U.S. Utility Market

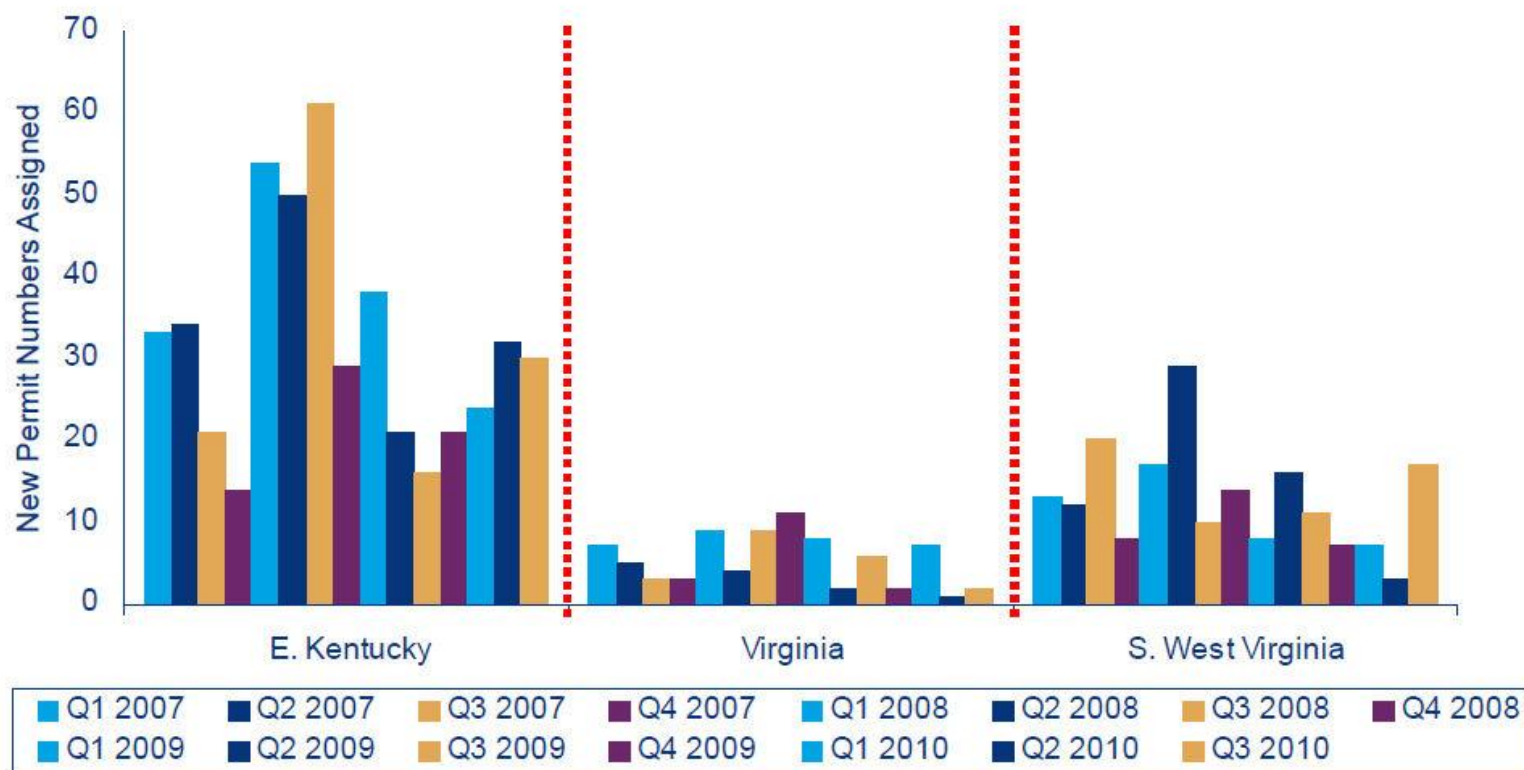
- ❑ Electric utility coal consumption: ~1 billion tons
- ❑ Coal: ~43% of total U.S. electricity generation (#1 market share). Natural gas is a distant second.
- ❑ The value of utility coal is driven by five components:
 - ❑ Btu or heat content (the higher, the better)
 - ❑ Sulfur (the lower, the better)
 - ❑ Ash content (the lower, the better)
 - ❑ Moisture content (the lower, the better)
 - ❑ Location, location, location (utilities pay the freight/rails dictate the economics)
- ❑ The key driver of utility coal prices are INVENTORIES, which are dictated by:
 - ❑ Weather
 - ❑ Natural gas prices (competes directly against coal)
 - ❑ General economic activity (coal burn tied to GDP)
 - ❑ The relative strength of the export market

Key Environmental Issues

- **New EPA CAIR Regulations** - On July 6th, the EPA proposed "The Transport Rule", which would require 31 states and the District of Columbia to reduce air pollution by meeting strict emission guidelines. The rule specifically limits emissions on SO₂ and NO_x that cross state lines. The reductions would take place one year after the rule is in place (2012), and by 2014, would reduce SO₂ emissions by 71% from 2005 levels and NO_x emissions by 52% from 2005 levels. A 60-day comment period began in August. The EPA hopes to have the rule finalized by late spring 2011.
- **Clean Water Act; Section 404** - The U.S. Army Corps of Engineers issues "404 permits" that define surface mining and waste fill requirements. The EPA has challenged many issued permits, further slowing Central Appalachian mine development. The National Mining Association has filed a lawsuit against the Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers, requesting that the court vacate recent federal rulings on surface mining and process a backlog of permit applications.
- **Coal Ash Regulations** - The EPA is in the process of developing new regulations for the storage and disposal of coal ash. The EPA is considering two potential avenues - one that classifies ash as "special waste" and another that classifies it as "solid waste". Under the "special waste" designation, the EPA could enforce strict standards for generation, storage, transport and disposal. Landfills would have to be lined and groundwater monitored.

New Permits

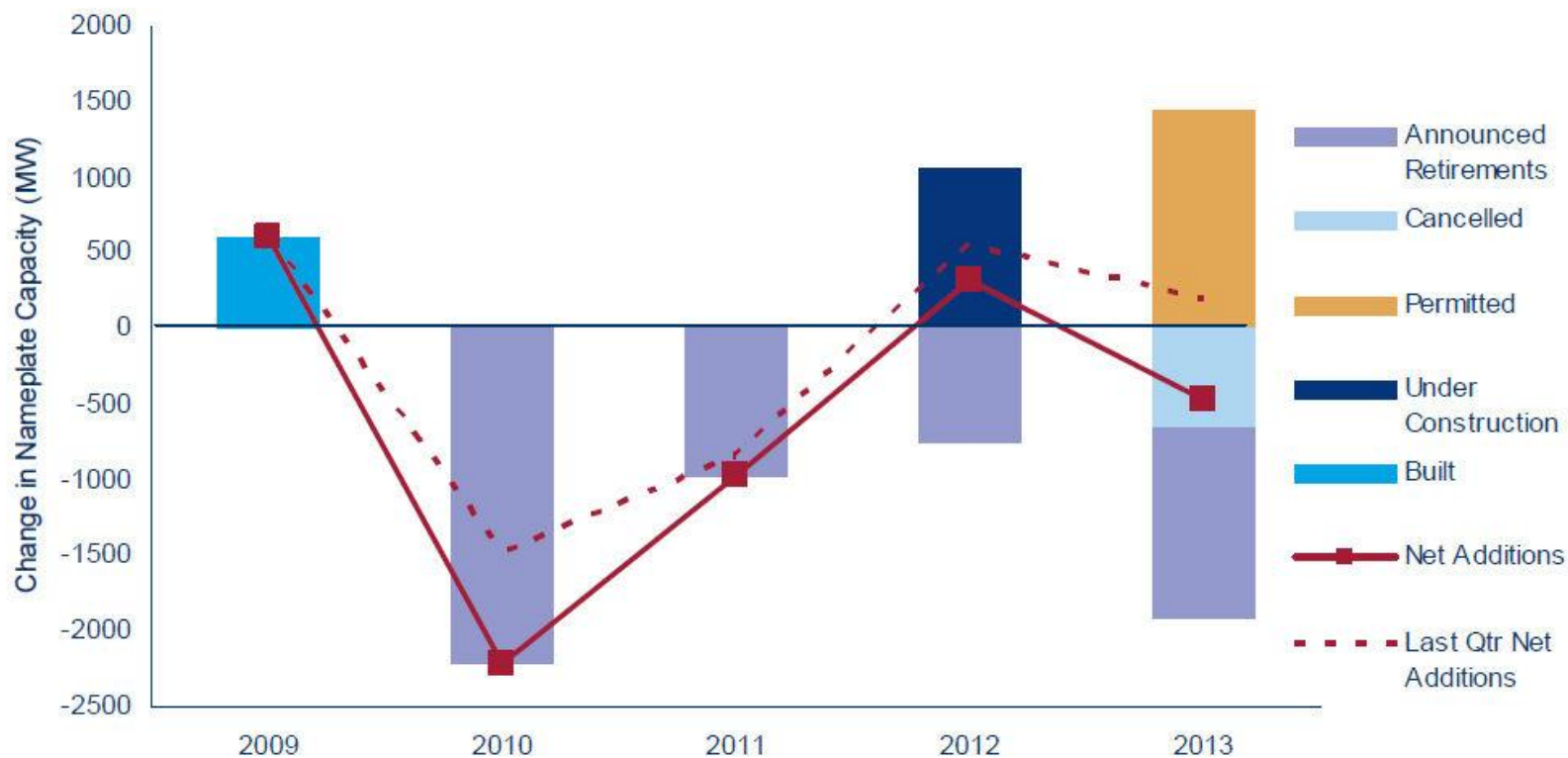
New permit assignments by quarter



Source: MSHA, Wood Mackenzie Coal Markets Research

CAPP Plant Status

CAPP Coal Fired Power Plant Status



Source: Wood Mackenzie Coal Market Service

New Scrubbers

Projected affected tons due to announced scrubbing

	Projected Affected Tons Due To Announced Scrubbing (Includes New Plants)				
	2009	2010 F	2011 F	2012 F	2013 F
New Scrubbed MW (US Total)	25,206	32,197	12,187	11,701	9,266
Coal Tons Affected (million short tons)	81	103	39	37	30

Source: Wood Mackenzie Coal Market Service

*Assumes 11,500 Btu Coal, 80% Capacity Factor, 10,500 btu/kWh heat rates

Eastern Cash Costs: Getting Worse

A Function of Three Factors: Increased Regulation, Geology, and Mix

Eastern (CAPP/NAPP) Operating Costs: A Historical & Projected Look

(\$/ton)	ANR	CNX	ICO	JRCC	MEE	PCX*	AVERAGE
2003	\$28.17				\$27.24		\$27.71
2004	\$36.11				\$29.08		\$32.60
2005	\$44.06	\$23.42		\$38.18	\$34.03		\$34.92
2006	\$46.34	\$25.22	\$38.20	\$42.97	\$40.94		\$38.73
2007	\$47.45	\$25.49	\$40.24	\$44.60	\$41.18	\$50.64	\$41.60
2008	\$60.53	\$31.36	\$46.66	\$52.45	\$46.65	\$57.91	\$49.26
2009	\$54.63	\$33.78	\$49.44	\$63.87	\$50.48	\$57.13	\$51.56
2010E	\$60.60	\$35.31	\$56.12	\$67.86	\$60.35	\$59.56	\$56.63
2011E	\$65.41	\$36.22	\$60.14	\$70.72	\$65.60	\$64.09	\$60.36
2012E	\$68.49	\$38.36	\$62.46	\$71.29	\$67.94	\$67.27	\$62.64
CAGR, 2006-2009	6%	10%	9%	14%	7%	6%	9%
CAGR, 2006-2012E	7%	7%	9%	9%	9%	6%	8%

Excludes SG&A, DD&A and other non-operating costs.

*Patriot Coal CAGRs are from 2007-2009 and 2007-2012E, respectively.

Source: Company reports

CAPP Production

CAPP Supply Demand Balance (million short tons)

	2008	2009	2010 Est.	2011 F	2012 F
CAPP Production	235	196	184	178	173
CAPP Demand	228	198	192	178	182
<i>Total Stockpile Level at end of calendar year*</i>	22	31	25	25	13
Corresponding days supply	50	71	58	58	40

Source: EIA, MSHA, Wood Mackenzie Coal Market Service

*Historical stockpiles approximate due to reporting issues