



Week Ending
April 19, 2016

Coal Weekly

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Conclusions...



● Weekly take-aways

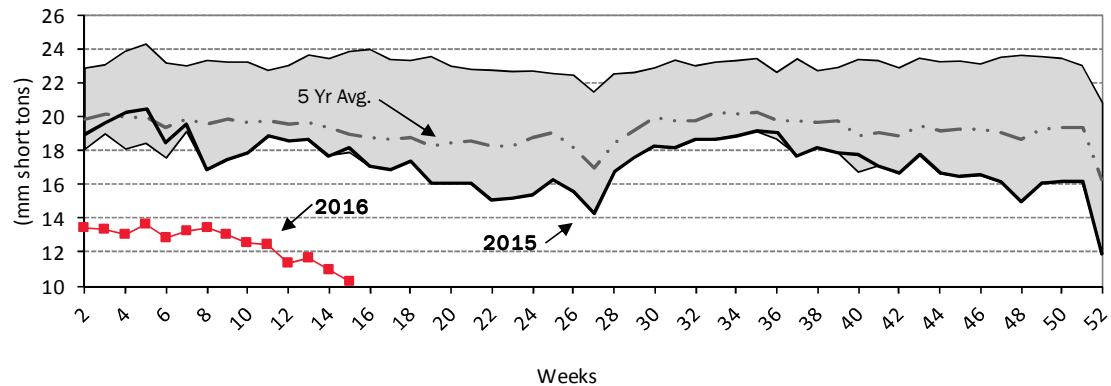
- **Production** – Total U.S. coal production for the week ending April 9 fell ~43% y/y to 10.2 mm tons setting a new record low, and ~7% below the trough experienced last week. Year-to-date production is now 91.7 mm tons, or ~33%, below the same period in 2015.
- **Pricing** –
 - *International Pricing* – The NW European thermal price increased ~6.5% to \$46.50/mt after reaching recent lows of sub-\$44/mt. The overseas price is still 22% lower y/y.
- **Coal-fired vs. Gas-fired Economics** – CAPP coal remains out of the money as the eastern natural gas price trades near \$1.75/mcf. The coal-fired fleet burning PRB coal is uneconomic at the current gas price.
- **Coal Carloads** – Compared to the same week last year, average weekly Eastern carloads were down ~42% and Western carloads declined ~46%. Eastern carloads decreased ~15% w/w, while Western volumes fell ~3.5% compared to the previous week.
- **Steel Plant Utilization** – For the week ending April 18, steel plant utilization gained ~2.5% to 72.4%.

Weekly Updates...

Domestic Coal Supply



U.S. Weekly Coal Production
(19 yr range - Minimum & Maximum Produced Volumes)



Weekly Production by Region (mm tons)					
Region	Week 15			% Change	
	9-Apr-16	11-Apr-15	5-yr avg	Y/Y	5-yr avg
Appalachian	2.5	4.7	5.6	-47.6%	-56.3%
Interior	1.9	3.3	3.4	-43.3%	-44.0%
Western	5.9	10.1	9.9	-41.6%	-40.5%
Total	10.2	18.1	18.9	-43.4%	-45.8%

YTD Production by Region (mm tons)					
Region	To-Date			% Change	
	2016	2015	5-yr avg	Y/Y	5-yr avg
Appalachian	45.5	72.1	84.1	-36.9%	-45.9%
Interior	35.1	52.4	51.2	-33.1%	-31.6%
Western	106.3	154.1	155.1	-31.0%	-31.5%
Total	186.9	278.6	290.5	-32.9%	-35.7%

Source: EIA

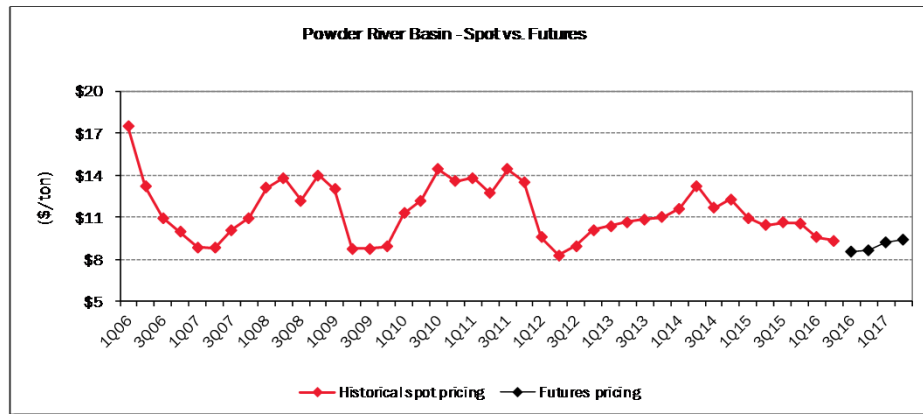
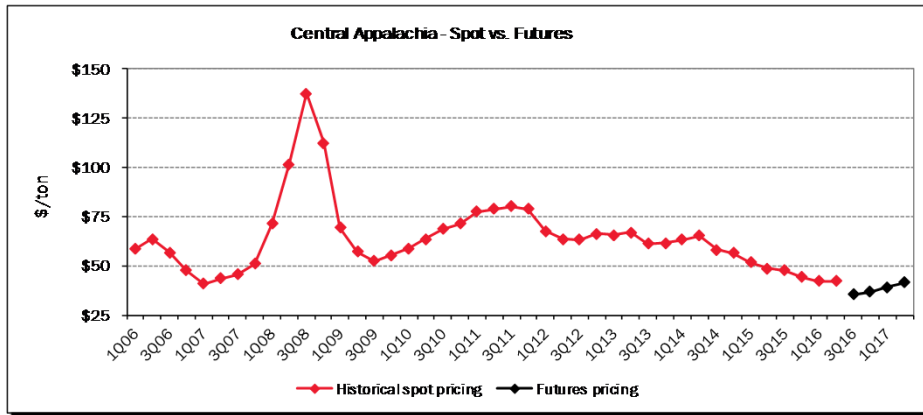
Weekly production

- Total U.S. coal production for the week ending April 9 fell ~43% y/y to 10.2 mm tons when compared to the same week last year.

Year-to-date production

- Year-to-date production is now 91.7 mm tons below the same period in 2015.
- 2015 ended the year with 895 mm tons produced, 10.5%, or ~105 mm tons, below that of 2014.

Coal Pricing...futures picture



Source: Bloomberg & Platts

CAPP Futures Pricing - Weekly Changes			
	Current Week	Previous Week	% Change
3Q16	\$35.30	\$35.50	-0.6%
4Q16	\$36.65	\$36.75	-0.3%
1Q17	\$39.25	\$39.10	0.4%
2Q17	\$41.35	\$41.20	0.4%
Average	\$38.14	\$38.14	0.0%

PRB Futures Pricing - Weekly Changes			
	Current Week	Previous Week	% Change
3Q16	\$8.60	\$9.10	-5.5%
4Q16	\$8.65	\$9.10	-4.9%
1Q17	\$9.25	\$9.55	-3.1%
2Q17	\$9.40	\$9.70	-3.1%
Average	\$8.98	\$9.36	-4.1%

Coal Pricing...domestic spot market



(\$/short ton)	CAPP	NAPP	Illinois Basin	PRB	Western Bit
Weekly Comparisons					
4/15/2016	\$42.30	\$46.60	\$29.65	\$9.35	\$37.80
4/8/2016	\$42.30	\$46.60	\$29.65	\$9.35	\$37.80
Weekly Change	0.0%	0.0%	0.0%	0.0%	0.0%
4/17/2015	\$52.88	\$60.92	\$42.30	\$12.13	\$39.82
Annual Change	-20.0%	-23.5%	-29.9%	-22.9%	-5.1%
12 Month High	\$54.90	\$60.92	\$42.30	\$12.13	\$40.65
12 Month Low	\$42.05	\$46.60	\$29.65	\$9.35	\$37.80

Quarterly Comparisons (Avg.)					
1Q11	\$76.83	\$74.16	\$44.85	\$13.88	\$38.45
2Q11	\$78.33	\$77.33	\$50.42	\$13.45	\$39.45
3Q11	\$79.88	\$77.53	\$53.68	\$14.33	\$39.76
4Q11	\$79.19	\$76.78	\$56.85	\$13.68	\$40.55
1Q12	\$69.69	\$69.82	\$50.67	\$11.30	\$39.77
2Q12	\$59.64	\$64.90	\$40.69	\$9.07	\$35.50
3Q12	\$62.15	\$64.95	\$39.85	\$8.91	\$35.60
4Q12	\$67.13	\$64.19	\$40.50	\$10.18	\$35.75
1Q13	\$66.38	\$62.18	\$41.10	\$10.24	\$35.85
2Q13	\$67.19	\$65.28	\$41.52	\$10.55	\$35.85
3Q13	\$63.77	\$68.40	\$42.40	\$10.38	\$35.85
4Q13	\$63.87	\$68.54	\$42.65	\$11.02	\$35.95
1Q14	\$62.10	\$68.47	\$42.90	\$12.39	\$36.04
2Q14	\$60.78	\$66.98	\$43.60	\$12.96	\$36.70
3Q14	\$56.67	\$63.31	\$41.65	\$11.78	\$36.54
4Q14	\$56.21	\$65.13	\$42.28	\$12.47	\$37.75
1Q15	\$53.29	\$62.39	\$42.33	\$12.50	\$38.10
2Q15	\$52.91	\$59.65	\$42.02	\$10.58	\$39.28
3Q15	\$50.39	\$52.60	\$33.09	\$9.96	\$39.57
4Q15	\$45.77	\$50.19	\$30.78	\$10.81	\$40.51
1Q16	\$42.18	\$48.53	\$30.15	\$9.57	\$38.52
2Q16	\$42.30	\$46.60	\$29.65	\$9.35	\$37.80
Q/Q Change (2Q16 vs. 1Q16)	0.3%	-4.0%	-1.7%	-2.3%	-1.9%
Y/Y Change (2Q16 vs. 2Q15)	-20.1%	-21.9%	-29.4%	-11.7%	-3.8%
Y/Y Change ('15 vs. '14)	-14.3%	-15.0%	-13.3%	-11.6%	7.1%

Weekly pricing

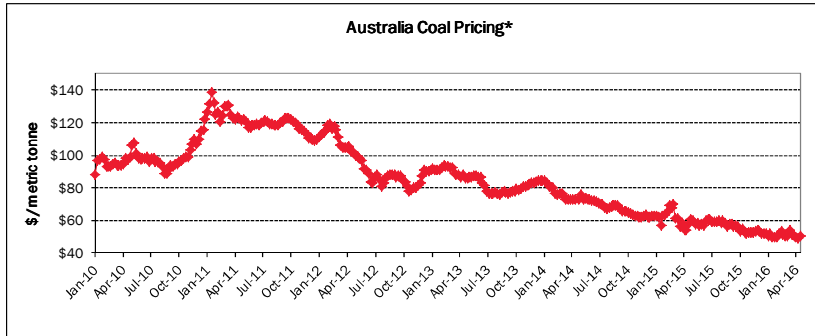
- All tracked pricing regions remained unchanged for the week.

Quarterly pricing

- Pricing activity continued its trend lower in 1Q16 across all pricing regions with PRB and CAPP falling the most q/q by 11.5% and ~8%, respectively. Western Bit, NAPP, and ILB followed with declines of 5%, ~3.5%, and 2%, respectively.

Source: SNL Energy

Spot Pricing...international markets



Source: Bloomberg

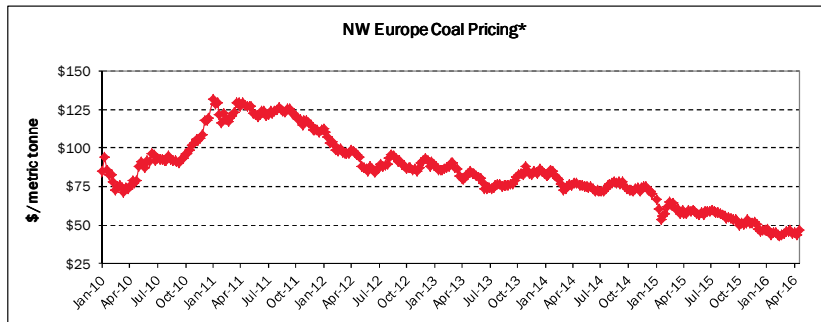
* API #3 Newcastle 6,000 kc GAD fob steam coal spot price

	2011	2012	2013	2014	2015	2016	% Change
Q1	\$127.72	\$112.29	\$91.33	\$77.43	\$62.85	\$51.19	-18.6%
Q2	\$119.97	\$94.49	\$85.38	\$72.73	\$58.07	\$49.67	-14.5%
Q3	\$120.50	\$86.15	\$77.06	\$67.96	\$58.10		
Q4	\$113.93	\$84.25	\$82.02	\$62.95	\$52.83		
Year	\$120.53	\$94.29	\$83.95	\$70.27	\$57.96		

Week End		% Change
4/17/2015	\$57.80	
4/15/2016	\$50.40	-12.8%
4/8/2016	\$48.75	3.4%

Australian spot pricing

- For the week ending April 15, Newcastle pricing rose ~3.5% to \$50.40/mt.



Source: Bloomberg

* API #2 coal delivered to the ARA region of Northwest Europe; prices are CIF (cost, insurance, freight) inclusive

	2011	2012	2013	2014	2015	2016	% Change
Q1	\$122.97	\$100.57	\$86.39	\$79.00	\$60.39	\$44.94	-25.6%
Q2	\$124.70	\$89.47	\$79.87	\$74.51	\$58.30	\$45.02	-22.8%
Q3	\$123.90	\$90.93	\$76.27	\$75.51	\$55.85		
Q4	\$114.51	\$88.77	\$84.28	\$72.96	\$49.77		
Year	\$121.52	\$92.43	\$81.70	\$75.50	\$56.08		

Week End		% Change
4/17/2015	\$59.90	
4/15/2016	\$46.50	-22.4%
4/8/2016	\$43.70	6.4%

European spot pricing

- Spot pricing in NWE increased ~6.5% to \$46.50/mt. The drop in the European thermal market has been a persistent theme since late 2012.

Coal vs. Gas Economics



Coal vs. Gas Economics				
	PRB/Midwest		Central App/East Coast	
<i>Assumptions</i>	Dark Spread	Spark Spread	Dark Spread	Spark Spread
Power price (\$/Mwh)	\$33.30	\$33.30	\$19.75	\$19.75
<i>Fuel costs (\$/ton)</i>				
Coal price	\$9.35		\$42.30	
Transportation cost	<u>\$25.00</u>		<u>\$12.00</u>	
Total fuel cost	\$34.35		\$54.30	
<i>Emissions costs</i>				
SO2 cost	\$0.01		\$0.01	
NOx cost	<u>\$0.00</u>		<u>\$0.00</u>	
Total emissions costs	\$0.01		\$0.01	
Total coal cost (per ton)	\$34.36		\$54.31	
Total fuel cost (per mmbtu)	\$1.95	\$1.69	\$2.26	\$1.77
Heat rate of plant (mmbtu/MWh)	10.0	7.5	10.0	7.5
Total coal cost (\$/MWh)	\$19.52	\$12.68	\$22.63	\$13.28
Gross margin (\$/MWh)	\$13.78	\$20.62	(\$2.88)	\$6.48

Source: Platts Coal Trader, SNL Energy, Scotia Howard Weil, Inc.

- CAPP coal remains out of the money as the eastern natural gas price trades near \$1.75/mcf. The coal-fired fleet burning PRB coal is uneconomic at the current gas price.

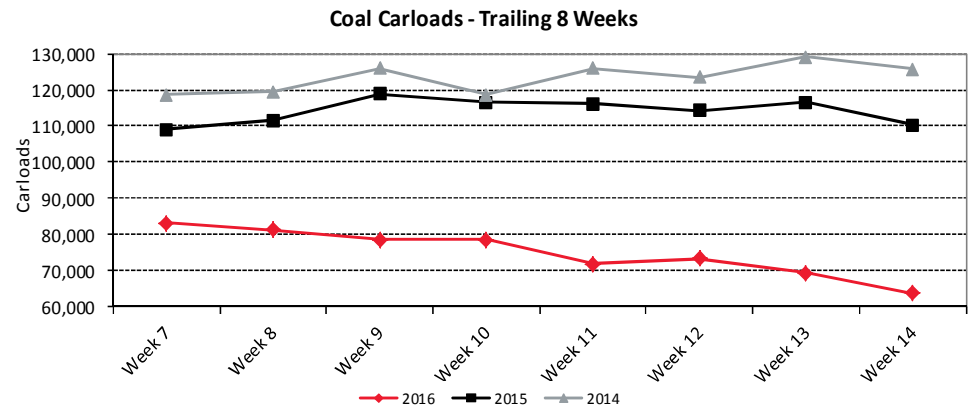
Coal Carloads



(in carloads)	Eastern		Western	
	CSX	NSC	BNI	UNP
Weekly Comparisons				
Week 14 - 2016	11,663	14,084	22,646	15,359
Week 13 - 2016	15,967	14,191	25,636	13,709
Weekly Change	-27.0%	-0.8%	-11.7%	12.0%
Week 14 - 2015	21,811	22,425	46,455	25,943
Annual Change	-46.5%	-37.2%	-51.3%	-40.8%
12 Month High	22,619	22,071	48,497	31,759
12 Month Low	11,495	11,458	22,646	13,709
Quarterly Comparisons (Avg.)				
1Q11	28,315	30,565	45,645	41,245
2Q11	27,976	29,288	41,515	37,204
3Q11	27,754	29,343	42,273	43,064
4Q11	26,772	29,580	48,140	41,723
1Q12	23,694	26,309	43,231	37,359
2Q12	23,321	25,961	37,676	31,084
3Q12	22,990	25,598	43,922	37,576
4Q12	21,348	25,839	42,030	34,541
1Q13	21,127	25,857	42,276	30,752
2Q13	21,885	25,399	39,942	31,203
3Q13	21,014	24,982	46,093	35,063
4Q13	20,117	23,631	43,080	30,868
1Q14	20,999	22,266	43,706	33,016
2Q14	23,518	25,952	42,352	31,456
3Q14	22,192	24,093	43,121	34,606
4Q14	22,200	21,857	45,204	34,177
1Q15	20,223	20,343	46,379	30,529
2Q15	20,329	20,249	42,357	23,008
3Q15	17,973	20,038	44,767	29,467
4Q15	15,266	18,175	42,703	26,427
1Q16	13,982	15,369	31,259	19,554
2Q16	13,815	14,138	24,141	14,534
Q/Q Change (2Q16 vs. 1Q16)	-1.2%	-8.0%	-22.8%	-25.7%
Y/Y Change (2Q16 vs. 2Q15)	-32.0%	-30.2%	-43.0%	-36.8%
2014	22,227	23,542	43,596	33,314
2015	18,448	19,701	44,052	27,358
Y/Y Change ('15 vs. '14)	-17.0%	-16.3%	1.0%	-17.9%

- **Eastern Rail Cars (CSX & NSC)**
 - Avg. Eastern coal carloads were down ~42% this week compared to the same week last year.
 - Eastern coal carloads decreased ~15% w/w.

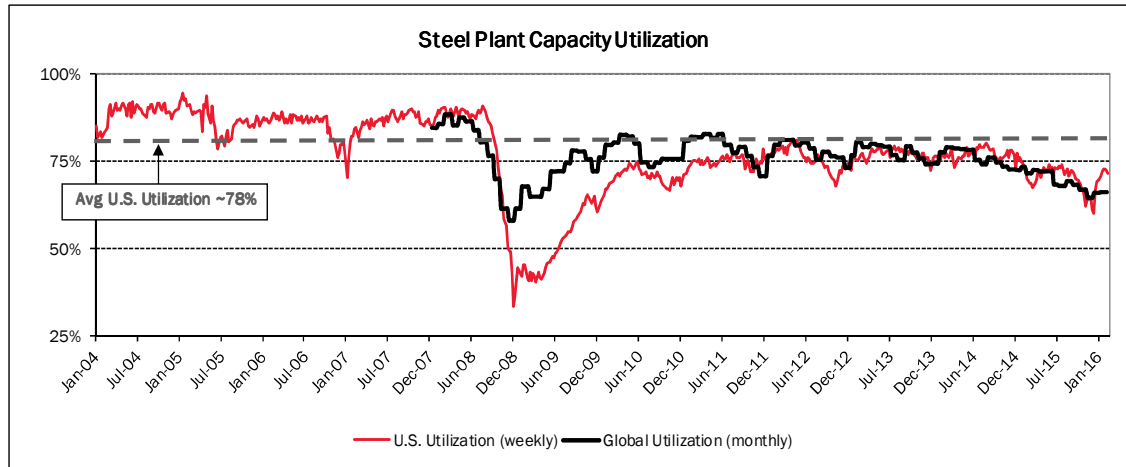
- **Western Rail Cars (BNI & UNP)**
 - Compared to the year ago week, avg. Western coal carloads declined ~48%.
 - Western coal carloads fell ~3.5% from last week.



Source: Companies & Scotia Howard Weil

Source: Companies & Scotia Howard Weil

Steel Plant Utilization



Source: Bloomberg

Domestic Utilization							
	2011	2012	2013	2014	2015	2016	% Change
1Q	73.7%	77.6%	75.6%	76.5%	72.7%	70.1%	-3.7%
2Q	74.7%	78.7%	77.9%	76.4%	71.7%	71.6%	-0.1%
3Q	76.2%	75.0%	77.9%	78.8%	72.5%		
4Q	74.3%	71.7%	76.1%	76.3%	66.8%		
Year	74.7%	75.7%	76.9%	77.0%	70.9%		

Week Begin	% Change
4/20/2015	70.0%
4/18/2016	72.4%
4/11/2016	70.8%

Global Utilization							
	2011	2012	2013	2014	2015	2016	% Change
1Q	81.1%	78.5%	79.0%	77.2%	72.4%	66.1%	-8.7%
2Q	82.5%	80.4%	79.6%	78.5%	72.3%		
3Q	78.8%	77.5%	77.2%	75.3%	68.5%		
4Q	74.0%	75.5%	75.7%	73.6%	66.6%		
Year	79.1%	78.0%	77.9%	76.1%	70.0%		

Month End	% Change
2/28/2016	66.0%
2/29/2016	66.2%
1/31/2016	66.0%

Domestic Weekly

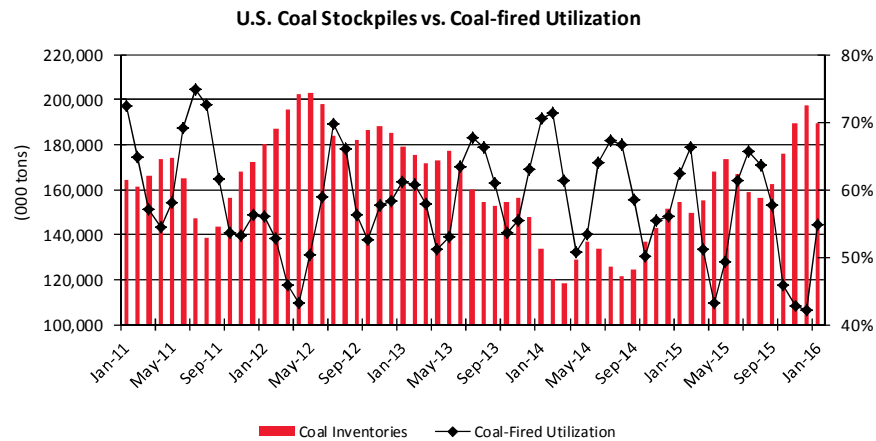
- For the week ending April 18, steel plant utilization gained ~2.5% to 72.4%.

Global Monthly

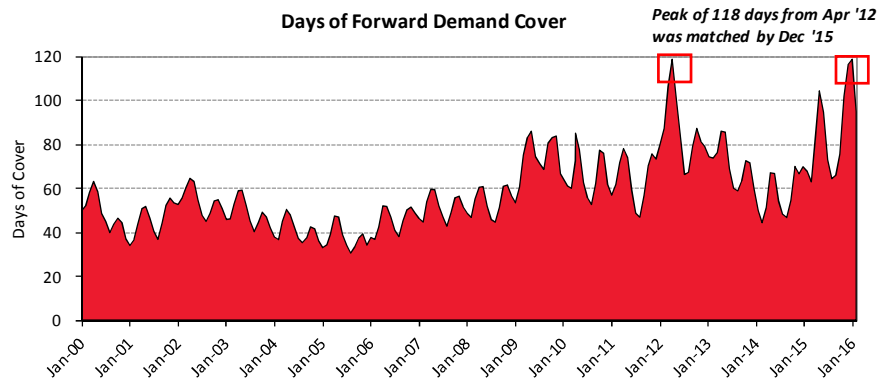
- For the month of February, global utilization increased ~0.5% m/m to a rate of 66.2%.

Monthly Updates...

Coal Stockpiles



Source: EIA



Source: EIA

January stockpile withdrawal

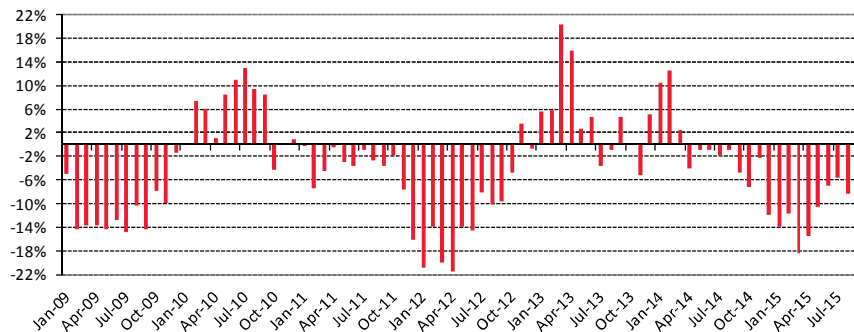
- Coal stocks for the month decreased 8.0 mm tons, as compared to the 5-year average withdrawal of 4.0 mm tons. Inventories of 189.1 mm tons are now 16.5% above an elevated 5-year average.

- The latest coal consumption and inventory estimates suggest a forward demand cover of 94 days. The 118 days of inventory in Dec. 2015 matched the record set in April 2012.

Coal Demand

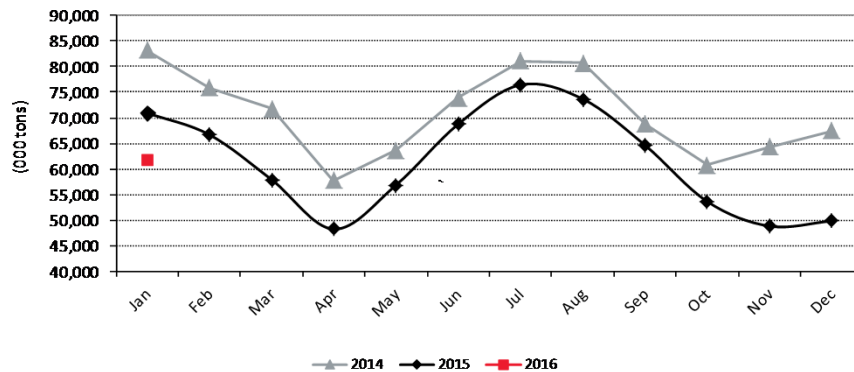


Y/Y Change in Total U.S. Coal Consumption



Source: EIA

U.S. Electric Sector Coal Demand



Source: EIA

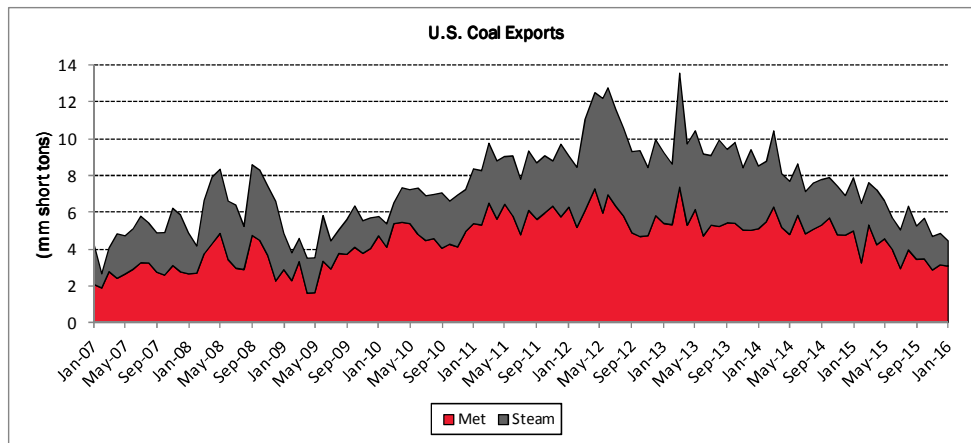
Total U.S. consumption

- Total coal demand for the month of September decreased ~5.5% to 70.0 mm tons compared to last year. September consumption was ~11% lower compared to the 5-year average for the month.
- 2014 consumption of 916.9 mm tons was 0.8%, or 7.5 mm tons, lower than the same period in 2013.

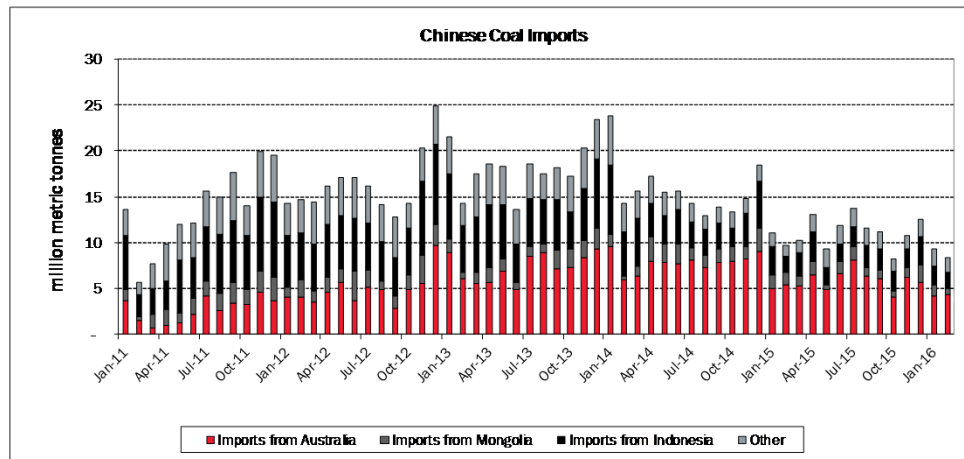
Electric Sector demand

- January coal demand at the electric sector declined ~13% y/y to 61.9 mm tons. Consumption was ~20% below the 5-year average.
- Full year 2015 consumption fell 112.3 mm tons, or ~13%, from the previous year.
- 2014 demand of 851 mm tons was ~0.5% higher than the 857 mm tons in 2013.
- Total 2013 demand at the electric sector rose nearly 37 mm tons or 4.5% to 856.9 mm tons from 2012 levels.

Coal Imports & Exports



Source: McCloskey



Source: Bloomberg

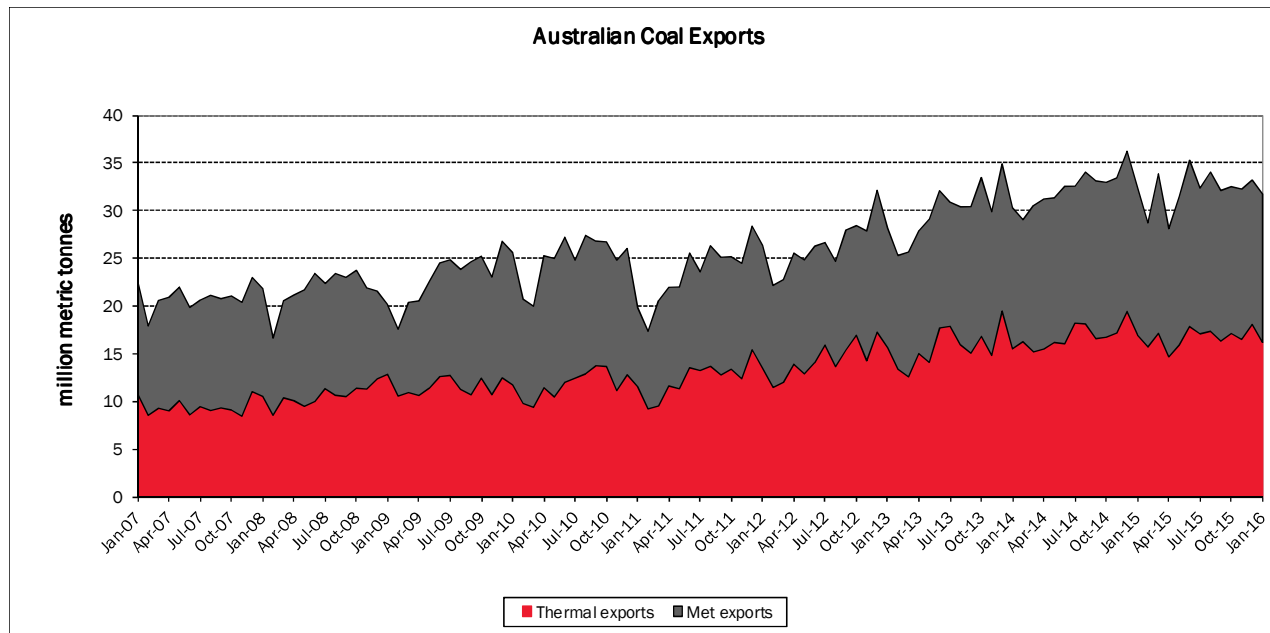
U.S. coal imports and exports

- January U.S. coal exports decreased ~44% y/y to 4.4 mst, and declined 8.5% m/m.
- Met coal volumes for January declined ~39% y/y to 3.1 mst. Additionally, exports decreased ~2.5% versus December levels.
- Thermal volumes fell ~53% y/y to 1.7 mst, and were ~20% lower m/m.
- 2015 exports of 73.3 mst were ~24%, or 23.5 mst, lower than the prior year.
- 2014 exports of 96.8 mst were ~17% lower than the 116.7 mst shipped in 2013.

Chinese imports

- For the month of February, Chinese coal imports declined 15% y/y to 9.8 mt, and fell 12% from January levels. YTD imports of 20.8 mt are 4.3 mt, or 17%, lower than the same period last year.
- Coking coal imports decreased ~25% compared to February 2015 to 3.0 mt, and decreased ~12% m/m.
- Thermal coal imports moved ~10% lower y/y to 6.8 mt, while falling ~12% from January levels.
- Total 2015 imports of 155.9 mt were ~32%, or 72.1 mt, lower than 2014 after growing ~15% the previous year.

Exports Continued....Australia



Source: Bloomberg

- **Australian Coal Exports** – Total Australian export volumes for the month of January decreased 2% vs. last year and ~4.5% m/m to 31.8 mt. Full year 2015 exports of 386.3 mt declined ~0.5% y/y, or 1.0 mt.
 - *Met Coal Exports* – Australian met coal exports for January rose ~1% y/y to 15.6 mt. Additionally, exports increased ~3% from December levels.
 - *Thermal Coal Exports* – January thermal exports declined 4.5% y/y to 16.2 mt, and fell ~10.5% m/m.

International Steel Production



Source: Bloomberg, World Steel Association

- **Chinese steel production moderates**

- Chinese steel supply for the month of February fell 5.5% y/y to 58.5 mt, and declined 6.5% m/m.
- Excluding China, international steel production declined ~2.5% from last year to 61.9 mt, and was down ~4% from January.

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