



DTC Daily Flash©: Wrap Up – 06 DEC 17

A Word of Thanks: We would like to take a moment to thank our select group of speakers and panelists today that made our event one for the record books. The room was abuzz with fantastic conversation from the panelists and from the myriad of thoughtful questions posed by those in attendance. We look forward to hosting this gathering every year as we always walk away knowing more than we did before. Thank you to all who attended today and for your continued support of DTC.

US Coal Market

- **PRB:** No trades in the OTC market with PRB 8800 unchanged; January unchanged at \$12.15; Q1 2018 unchanged at \$12.15; Q2 2018 unchanged at \$11.97; 2018 unchanged at \$12.01; 2019 unchanged at \$12.05; and 2020 unchanged at \$12.10.
- **Capp:** No trades in the OTC market with Capp river and Capp rail unchanged:
 - Capp River 12,000: January unchanged at \$58.00; Q1 2018 unchanged at \$57.50; Q2 2018 unchanged at \$57.50; 2018 unchanged at \$57.50; 2019 unchanged at \$57.50; and 2020 unchanged at \$57.50.
 - Capp Rail 12,500: January unchanged at \$64.90; Q1 2018 unchanged at \$65.13; Q2 2018 unchanged at \$64.05; 2018 unchanged at \$63.25; 2019 unchanged at \$60.35; and 2020 unchanged at \$59.10.
- **Napp/ILB/CO/UT:** No changes today.

Utility Corner

- **Natural Gas Prices (Henry Hub):** Prompt Month (January) Natgas was up \$0.01 to \$2.92/mmBtu. Prompt Quarter (Q1 2018) was unchanged at \$2.91/mmBtu and Prompt Year (2018) was unchanged at \$2.89/mmBtu.

Key Takeaways from the Coal & Energy Price Report (CEPR) and Inside Coal: Publication Editor, Jim Thompson, has graciously allowed **DTC** to include an excerpt from his publications. If you would like more information on *Energy Publishing*, please contact them at 865.584.6294.

- **ArcelorMittal Poland Has Coking Coal Shortage:** ArcelorMittal announced that it is facing a coking coal shortage in Poland and will be forced to turn to the import market to make up the shortage as its current inventories are not sufficient to meet the winter inventory level. The Company is wrapping up its 2018 supply contracts and any contracted coal that isn't delivered this year will be available for 2018, but imported tons are needed right now to make up a domestic supply gap.

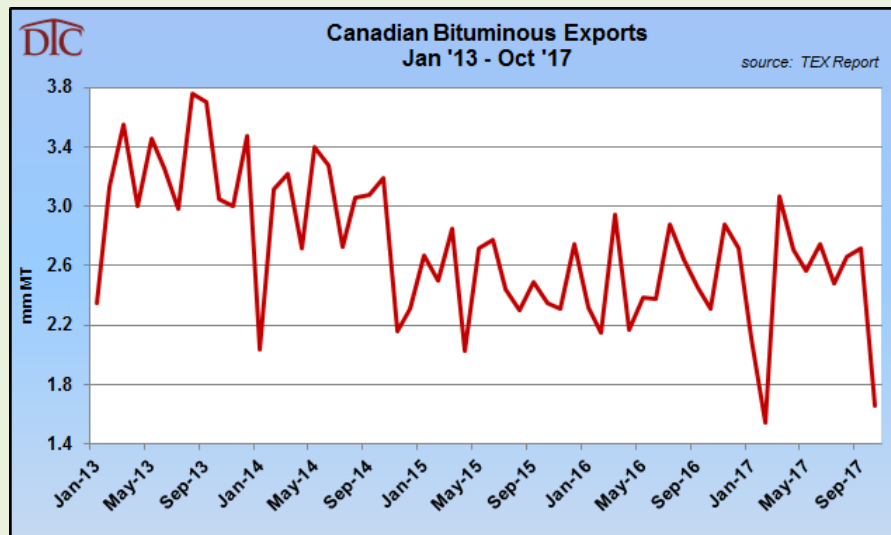
Global Steam Coal

- **Ocean freight rates** for the C4 route (capesize vessel from Richards Bay to Rotterdam) were unchanged at \$8.75/MT for Q1 2018, unchanged at \$8.00/MT for 2018, unchanged at \$7.88/MT for 2019.
- **The API 2** (coal delivered into northern Europe) for Q1 2018 was up \$0.75 to \$90.35/MT; Q2 2018 was up \$0.60 to \$86.35/MT; 2018 was up \$0.80 to \$86.50/MT; 2019 was up \$0.70 to \$80.50/MT, and 2020 was up \$0.70 to \$76.90/MT.

- **The API 4** (South Africa) for Q1 2018 was down \$0.15 to \$93.55/MT; Q2 2018 was up \$0.55 to \$90.10/MT; 2018 was up \$0.55 to \$89.65/MT; 2019 was up \$0.50 to \$84.00/MT, and 2020 was up \$0.65 to \$80.50/MT.
- **The Newcastle market** (Australia) for Q1 2018 was up \$0.70 to \$95.00/MT; Q2 2018 was up \$0.80 to \$90.90/MT; 2018 was up \$0.70 to \$90.40/MT; 2019 was up \$0.55 to \$84.35/MT, and 2020 was up \$0.70 to \$80.40/MT.

Global Coking Coal

- **Q4'17 Index-Based Price for PHCC:** Following up on **DTC's** report yesterday of **Teck Resources (TECK)** indicating that the Q4'17 index-based contract price for premium hard-coking coal had been established at \$191/MT, *Inside Coal* today noted that the Q4 quarterly price has emerged within a range between \$191-193/MT, reflecting a range of different baskets of market indices being used by market participants to calculate the average of daily prices for Sep – Nov, and suggesting that **Nippon Steel & Sumitomo Metal Corporation's** contract price for the quarter will be \$192.68/MT.
- **Nippon Steel expects PHCC to stay above \$200/MT through Q1'18:** Per *Reuters*, Toshiharu Sakae, **Nippon Steel & Sumitomo's** executive vice president, expressed the view that worldwide steel demand will stay strong through Q1. This demand pull comes despite China's seasonal reduction in steelmaking, as demand growth continues in India and other steel-producing countries. Demand for premium coking is expected to remain strong as buyers look to build inventory to mitigate against the risk of supply disruptions from Australia's cyclone season.
- **Canadian Bituminous Exports Decline in Oct:** 1.66 mm MT, down 40.94% seq pd and 28.42% YoY. YTD exports of 23.85 mm MT are down 3.19% YoY and annualize to 28.64 mm MT (vs 30.23 mm MT in 2016). The top three destinations in October were Japan (350K MT at an avg price of C\$205.99/MT); S Korea (260K MT at an avg price of C\$252.29/MT); and Netherlands (254K MT at an avg price of C\$233.94/MT).



- **Metal Bulletin Coking Coal Index:** The **Metal Bulletin Group** is a leading price reporting agency for the metals and mining markets with a portfolio that covers over 2,000 prices.
 - Premium HCC CFR Jingtang: \$208.65/MT, up \$2.69/MT
 - HCC CFR Jingtang: \$187.03/MT, up \$2.41/MT
 - Premium HCC FOB Dalrymple Bay: \$229.08/MT, up \$11.32/MT
 - HCC FOB Dalrymple Bay: \$172.24/MT, unchanged

Coal Equity

- **NS Delisting Notes: Norfolk Southern (NSC)** notified of its intention to voluntarily delist from the NYSE the Company's (i) 9.00% Notes Due March 1, 2021, (ii) 3.25% Notes Due December 1, 2021, (iii) 3.00% Notes Due April 1, 2022, (iv) 5.59% Notes Due May 17, 2025, (v) 7.80% Notes Due May 15, 2027, (vi) 5.64% Notes Due May 17, 2029, (vii) 7.25% Notes Due February 15, 2031, (viii) 7.05% Notes Due May 1, 2037, (ix) 4.837% Notes Due October 1, 2041, (x) 3.95% Notes Due October 1, 2042, (xi) 7.90% Notes Due May 15, 2097, (xii) 6.00% Notes Due March 15, 2105, and (xiii) 6.00% Notes Due May 23, 2111 (collectively, the "Listed Notes"), as well as to deregister the Listed Notes from registration under Section 12(b) of the Securities Exchange Act of 1934, as amended, with the SEC. On December 18, 2017, **NSC** intends to file a Form 25 with the SEC and it is expected that the last day of trading of the Listed Notes on the NYSE will be Wednesday, December 27, 2017. **NSC** does not intend to arrange for listing or registration of the Listed Notes on another exchange or for quotation in a quotation medium.
- **Recap: ARCH** (down 1.49%), **ARLP** (down 1.66%), **BTU** (up 1.08%), **CCR** (down 2.19%), **CEIX** (up 0.71%), **CLD** (up 0.48%), **CNTE** (down 0.47%), **CSO.V** (down 2.14%), **FELP** (up 0.46%), **HCC** (up 0.56%), **HNRG** (down 0.17%), **METC** (up 3.18%), **NRP** (down 1.41%), and **WLB** (up 8.11%).

Capp Netback Prices (a positive netback indicates Capp steam coal is theoretically competitive overseas and a negative netback indicates it is theoretically 'out-of-the-money')

- **January 2018 Capp Rail Netback Price:** (\$0.33)/ton;
- **Q1 2018 Capp Rail Netback Price:** (\$2.16)/ton;
- **Q2 2018 Capp Rail Netback Price:** (\$3.92)/ton;
- **2018 Capp Rail Netback Price:** (\$5.24)/ton;
- **2019 Capp Rail Netback Price:** (\$8.24)/ton;
- **Capp River/New Orleans Netback:** January 2018 is \$3.18/ton 'out-of-the-money'; Q1 2018 is \$4.10/ton 'out-of-the-money'; Q2 2018 is \$6.42/ton 'out-of-the-money'; 2018 is \$6.69/ton 'out-of-the-money'; and 2019 is \$12.30/ton 'out-of-the-money'.

Coal vs Natgas: Our Coal vs Natgas model compares the cost of power generated by an un-remediated regional coal plant purchasing emissions credits vs that of a combined cycle natgas plant. The analysis is for prompt month. Regional natgas prices are adjusted using prior-day basis differentials to Henry Hub, the most readily available data. With the rolling of the natgas prompt month, we have re-incorporated CSAPR allowance prices into coal generation costs. CSAPR compliance regions do not overlap perfectly with the regions we model, but for simplicity we have included Annual and Seasonal CSAPR NO_x allowances for all regions. We've applied Group 2 SO₂ prices to ERCOT and SERC, and Group 1 to all other regions.

DTC's Coal vs. Natgas Model©
Representative Regional Coal Plant (w/o SCR or Scrubber) vs. 7,000 Btu/KWh Heat Rate Natgas Plant
Model Comparison Period: Jan-18 (All-in Costs per MWh)

Inputs: Current Coal, Emissions*, Natgas Prices

Region	PJM East	PJM West	NYISO West	Ill (Midwest)	ERCOT	SERC	SERC
Coal Source	Napp 13000 4.5# Rail	Napp 13000 4.5# Rail	Napp 13000 4.5# Rail	ILB 11500 5.2# Barge	PRB 8800	Capp 12500 <1% Rail	ILB 11,800 4.5# Rail
Coal Gen Costs (\$/MWh)	\$26.19	\$25.93	\$32.03	\$20.52	\$22.71	\$37.36	\$27.58
Natgas Gen Costs (\$/MWh)	\$18.16	\$20.46	\$23.50	\$21.29	\$21.57	\$21.44	\$21.44
Spread (\$/MWh) **	(\$8.03)	(\$5.47)	(\$8.52)	\$0.76	(\$1.15)	(\$15.91)	(\$6.13)
Henry Hub Breakeven (\$/mmBtu)	\$4.07	\$3.70	\$4.14	\$2.81	\$3.09	\$5.19	\$3.80
Coal Breakeven (\$/ton)	\$28.73	\$35.43	\$27.16	\$37.83	\$10.07	\$25.12	\$19.52

*RGGI prices included in NYISO West; Group 2 SO2 applied to ERCOT and SERC, Group 1 SO2 applied to all others; Annual NOx allowances applied to all regions

**Negative spread signifies the natgas gen costs are theoretically cheaper than coal gen costs.

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DTC's Daily Price Update

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Company	31-Dec 2012	31-Dec 2013	31-Dec 2014	31-Dec 2015	30-Dec 2016	30-Nov 2017	6-Dec 2017	D2D	MTD (excl. div.)	YTD (excl. div.)
Arch/ARCH	n/a	n/a	n/a	\$63.00	\$78.05	\$82.56	\$83.20	(\$1.26)	0.78%	6.60%
Alliance/ARLP	\$29.03	\$38.50	\$43.05	\$13.49	\$22.45	\$18.25	\$17.75	(\$0.30)	-2.74%	-20.94%
Cld Peak/CLD	\$19.33	\$18.00	\$9.18	\$2.08	\$5.61	\$4.14	\$4.21	\$0.02	1.69%	-24.96%
Contura Energy/CNTE	n/a	\$68.33	\$69.00	\$52.44	\$71.00	\$59.50	\$59.20	(\$0.28)	-0.50%	-16.62%
CNX Coal Res/CCR	n/a	n/a	n/a	n/a	n/a	\$14.05	\$13.40	(\$0.30)	-4.63%	n/a
CNX Energy/CEIX	n/a	n/a	n/a	n/a	n/a	\$22.00	\$21.20	\$0.15	-3.64%	n/a
Corsa/CSO.V	\$3.20	\$3.40	\$3.70	\$0.60	\$3.11	\$1.40	\$1.37	(\$0.03)	-2.14%	-55.95%
Peabody/BTU	n/a	n/a	n/a	n/a	n/a	\$33.31	\$33.54	\$0.36	0.69%	19.79%
Foresight/FELP	n/a	n/a	\$16.83	\$3.54	\$6.47	\$4.30	\$4.39	\$0.02	2.09%	-32.15%
Warrior Met Coal/HCC	n/a	n/a	n/a	n/a	n/a	\$22.22	\$23.19	\$0.13	4.37%	22.05%
Hallador/HNRG	\$8.26	\$8.06	\$11.01	\$4.56	\$9.09	\$6.56	\$5.72	(\$0.01)	-12.80%	-37.07%
Ramaco/METC	n/a	n/a	n/a	n/a	n/a	\$4.75	\$4.86	\$0.15	2.32%	-64.00%
Nat Res Part/NRP	\$185.40	\$199.40	\$92.50	\$12.70	\$32.30	\$25.40	\$24.55	(\$0.35)	-3.35%	-23.99%
Westmoreland/WLB	\$9.34	\$19.29	\$33.21	\$5.89	\$17.67	\$1.15	\$1.20	\$0.09	4.35%	-93.21%
API 2 (Coal Delivered in Northern Europe) - \$/Metric Ton										
Prompt MO	\$90.05	\$81.60	\$66.55	\$47.25	\$86.50	\$90.20	\$92.25	\$0.80	2.27%	6.65%
Prompt QTR	\$90.60	\$80.85	\$66.00	\$46.25	\$80.15	\$88.10	\$90.35	\$0.75	2.55%	12.73%
Prompt QTR +1	\$92.70	\$80.95	\$64.85	\$43.75	\$70.00	\$85.10	\$86.35	\$0.60	1.47%	23.36%
Prompt YR	\$94.05	\$82.30	\$65.75	\$43.90	\$70.05	\$84.95	\$86.50	\$0.80	1.82%	33.90%
Prompt YR +1	\$102.65	\$87.45	\$66.75	\$41.85	\$64.60	\$79.85	\$80.50	\$0.70	0.81%	29.01%
Prompt YR +2	\$109.65	\$91.45	\$68.55	\$41.75	\$62.40	\$76.25	\$76.90	\$0.70	0.85%	24.64%
API 4 (Coal Loaded into Vessel at Richards Bay, South Africa) - \$/Metric Ton										
Prompt MO	\$89.55	\$85.10	\$63.85	\$49.25	\$86.85	\$93.50	\$94.55	(\$0.20)	1.12%	8.87%
Prompt QTR	\$90.15	\$84.35	\$63.60	\$48.40	\$84.65	\$92.50	\$93.55	(\$0.15)	1.14%	10.51%
Prompt QTR +1	\$91.25	\$82.05	\$62.10	\$45.60	\$77.80	\$88.90	\$90.10	\$0.55	1.35%	15.81%
Prompt YR	\$92.25	\$82.65	\$62.75	\$44.90	\$76.55	\$88.30	\$89.65	\$0.55	1.53%	26.71%
Prompt YR +1	\$99.35	\$84.70	\$62.60	\$42.30	\$70.75	\$83.35	\$84.00	\$0.50	0.78%	22.99%
Prompt YR +2	\$105.55	\$87.30	\$63.65	\$41.65	\$68.30	\$79.85	\$80.50	\$0.65	0.81%	19.44%
NEWC (Coal loaded into Vessel at Newcastle, Australia) - \$/Metric Ton										
Prompt MO	\$94.30	\$87.30	\$62.70	\$50.40	\$95.50	\$95.45	\$96.25	\$0.70	0.84%	0.79%
Prompt QTR	\$94.55	\$86.80	\$62.10	\$50.25	\$92.55	\$94.20	\$95.00	\$0.70	0.85%	2.65%
Prompt QTR +1	\$95.05	\$84.50	\$60.25	\$48.35	\$85.15	\$89.90	\$90.90	\$0.80	1.11%	6.75%
Prompt YR	\$95.55	\$85.20	\$60.75	\$47.70	\$83.35	\$89.60	\$90.40	\$0.70	0.89%	16.80%
Prompt YR +1	\$101.40	\$85.70	\$60.40	\$45.50	\$77.40	\$83.20	\$84.35	\$0.55	1.38%	12.32%
Prompt YR +2	\$107.00	\$87.90	\$61.50	\$44.65	\$75.10	\$80.10	\$80.40	\$0.70	0.37%	8.06%
PRB 8800 .80lbs SO2										
Prompt MO	\$10.00	\$12.00	\$11.65	\$10.20	\$12.20	\$12.10	\$12.15	\$0.00	0.41%	-0.41%
Prompt QTR	\$10.05	\$11.90	\$11.95	\$10.15	\$12.08	\$12.10	\$12.15	\$0.00	0.41%	0.55%
Prompt QTR +1	\$10.05	\$12.10	\$12.45	\$9.65	\$11.95	\$12.00	\$11.97	\$0.00	-0.25%	0.17%
Prompt YR	\$10.30	\$12.35	\$12.50	\$9.70	\$11.98	\$12.03	\$12.01	\$0.00	-0.17%	-1.50%
Prompt YR +1	\$12.05	\$13.30	\$14.00	\$10.20	\$12.19	\$12.10	\$12.05	\$0.00	-0.41%	-3.60%
Prompt YR +2	\$14.10	\$14.45	\$15.30	\$11.35	\$12.50	\$12.15	\$12.10	\$0.00	-0.41%	n/a

PRB 8400 .80lbs SO2										
Time Period	31-Dec 2012	31-Dec 2013	31-Dec 2014	31-Dec 2015	30-Dec 2016	30-Nov 2017	6-Dec 2017	D2D	MTD	YTD
Prompt MO	\$9.25	\$11.05	\$9.35	\$8.45	\$9.25	\$9.60	\$9.65	\$0.00	0.52%	4.32%
Prompt QTR	\$9.55	\$10.40	\$9.55	\$8.52	\$9.33	\$9.50	\$9.55	\$0.00	0.53%	2.32%
Prompt QTR +1	\$9.55	\$10.20	\$9.80	\$8.55	\$9.50	\$9.35	\$9.32	\$0.00	-0.32%	-1.89%
Prompt YR	\$9.55	\$10.30	\$10.05	\$8.59	\$9.58	\$9.34	\$9.32	\$0.00	-0.21%	-8.38%
Prompt YR +1	\$9.90	\$10.65	\$11.10	\$8.86	\$10.18	\$9.35	\$9.30	\$0.00	-0.53%	-11.43%
Prompt YR +2	\$10.55	\$11.45	\$11.80	\$9.95	\$10.50	\$9.40	\$9.35	\$0.00	-0.53%	n/a
CSX 12,500 1% (Capp Rail)										
Prompt MO	\$61.00	\$67.75	\$50.90	\$39.40	\$60.50	\$64.85	\$64.90	\$0.00	0.08%	7.27%
Prompt QTR	\$61.50	\$66.80	\$50.25	\$38.25	\$58.80	\$65.00	\$65.13	\$0.00	0.21%	10.77%
Prompt QTR +1	\$64.80	\$65.55	\$50.05	\$37.80	\$55.90	\$63.90	\$64.05	\$0.00	0.23%	14.58%
Prompt YR	\$65.90	\$66.00	\$50.40	\$38.49	\$56.18	\$63.08	\$63.25	\$0.00	0.27%	16.64%
Prompt YR +1	\$73.55	\$68.40	\$52.00	\$41.55	\$54.23	\$60.20	\$60.35	\$0.00	0.25%	11.04%
Prompt YR +2	\$79.30	\$72.35	\$54.50	\$45.05	\$54.35	\$59.00	\$59.10	\$0.00	0.17%	n/a
Nymex 12,000 1% (Capp River)										
Prompt MO	\$58.60	\$57.50	\$46.25	\$43.80	\$56.00	\$58.00	\$58.00	\$0.00	0.00%	3.57%
Prompt QTR	\$58.55	\$57.25	\$48.25	\$43.90	\$56.00	\$57.50	\$57.50	\$0.00	0.00%	2.68%
Prompt QTR +1	\$62.25	\$58.05	\$50.75	\$44.85	\$54.00	\$57.50	\$57.50	\$0.00	0.00%	6.48%
Prompt YR	\$63.30	\$58.20	\$50.60	\$45.25	\$53.38	\$57.50	\$57.50	\$0.00	0.00%	15.93%
Prompt YR +1	\$70.80	\$61.40	\$52.50	\$48.19	\$49.60	\$57.50	\$57.50	\$0.00	0.00%	13.64%
Prompt YR +2	\$76.40	\$65.45	\$55.10	\$51.25	\$50.60	\$57.50	\$57.50	\$0.00	0.00%	n/a
Napp 13,000 4.75 lbs SO2 (Rail) Prior to 2017, specs were 13,000 4.0/4.5 lbs SO2 (rail)										
Prompt QTR	\$54.50	\$55.75	\$50.50	\$37.50	\$50.50	\$48.75	\$48.75	\$0.00	0.00%	-3.47%
Prompt YR	\$54.50	\$56.13	\$50.95	\$37.88	\$48.38	\$46.25	\$46.25	\$0.00	0.00%	3.93%
Illinois Basin 11,500 5.2lbs (Barge) Prior to 2012, specs were 11200 5# SO2 (barge)										
Prompt QTR	\$41.75	\$42.50	\$36.00	\$31.60	\$35.00	\$36.00	\$36.00	\$0.00	0.00%	2.86%
Prompt YR	\$42.88	\$42.50	\$36.30	\$32.25	\$34.75	\$35.15	\$35.15	\$0.00	0.00%	0.00%
Natural Gas (Henry Hub)										
Prompt MO	\$3.35	\$4.23	\$2.89	\$2.34	\$3.72	\$3.03	\$2.92	\$0.01	-3.40%	-21.54%
Prompt QTR	\$3.45	\$4.10	\$2.91	\$2.43	\$3.56	\$3.02	\$2.91	\$0.01	-3.45%	-18.04%
Prompt YR	\$4.03	\$4.14	\$3.46	\$2.79	\$3.14	\$2.96	\$2.89	\$0.01	-2.29%	-7.96%
Cross State Air Pollution Rule Allowances										
Annual NOx	n/a	n/a	n/a	n/a	\$7.50	\$2.50	\$2.50	\$0.00	0.00%	-66.67%
Seasonal NOx	n/a	n/a	n/a	n/a	n/a	\$150.00	\$150.00	\$0.00	0.00%	n/a
SO2 Group 1	n/a	n/a	n/a	n/a	\$6.00	\$2.50	\$2.50	\$0.00	0.00%	-58.33%
SO2 Group 2	n/a	n/a	n/a	n/a	\$6.00	\$3.00	\$3.00	\$0.00	0.00%	-50.00%
(Price curves supplied by Evolution Markets, Coaldesk and CME Group)										
(YTD % change for Monthly and Quarterly futures is against prompt contract at end of prior year)										