

# National Coal Council Birmingham, AL

September 27, 2017

## Global Coal Markets Update – Opportunities for US Coal Exports



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# The Finer Things

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# About DTC

Since 2002, DTC has served the needs of the coal and energy industry. More than 1000 industry leaders from over 200 companies subscribe to our services. We give our clients an edge by providing the following:

- ✓ **Principal Service**
- ✓ **Quarterly Coal Outlook and Price Forecast Report**
- ✓ **Utility and Natural Gas Insights Report**
- ✓ **Boardroom Presentations**
- ✓ **Bespoke Consulting**

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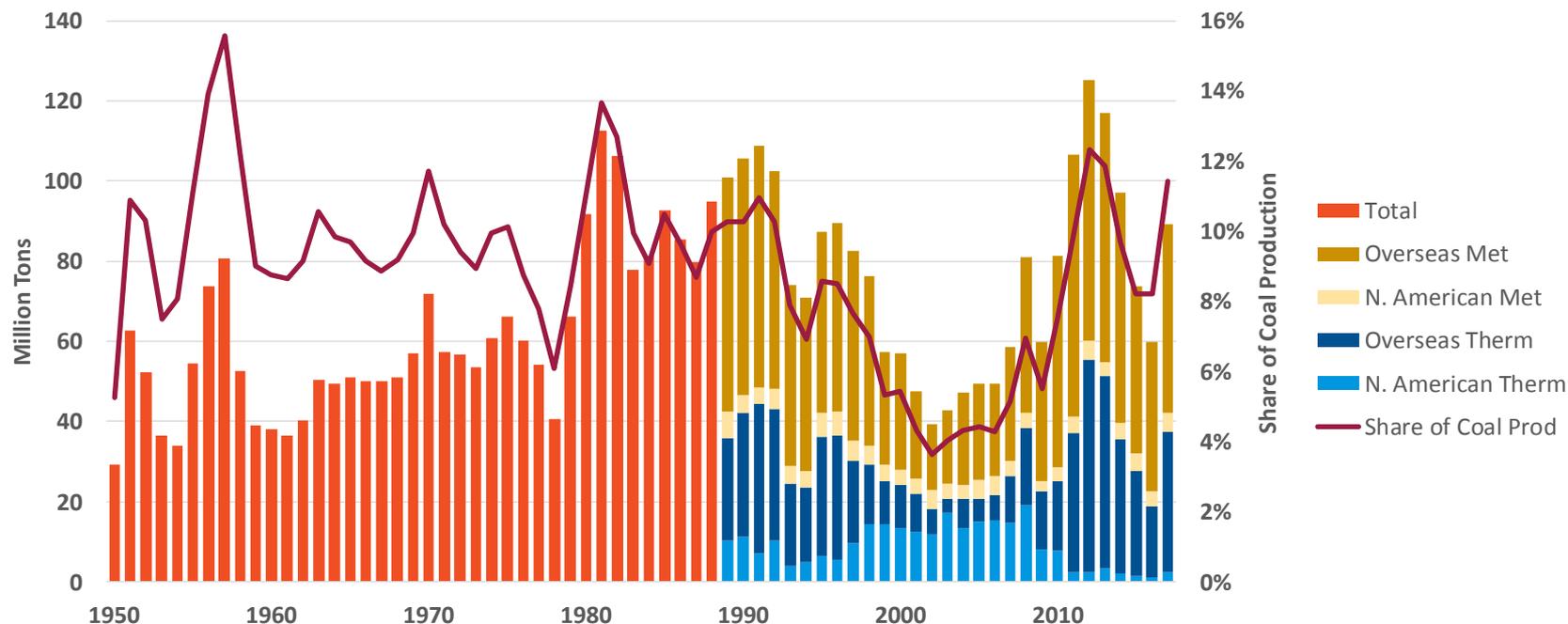
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# The Global and US Coal Markets – a 30,000 foot view

- US exports primarily influenced by domestic demand and international prices
- US demand for power is slowing
  - Annual power growth was as follows:
    - '50s: 9.4%, '60s: 7.4%, '70s: 4.6%, '80s: 2.4%, '90s: 2.2%, '00s: 1.1%, '10s: -0.4%
  - Renewables and natgas taking market share
- International thermal and coking coal prices currently very strong
  - Coking coal prices very volatile, dependent on outside factors
  - Thermal coal prices very high, but backwardated
- US exports play increasingly significant role
  - Asia is growth market
    - Long haul distance
    - CC quality does not fit as well as with Europe
  - Europe is natural partner for US

# U.S. Coal Exports: A Historical Perspective



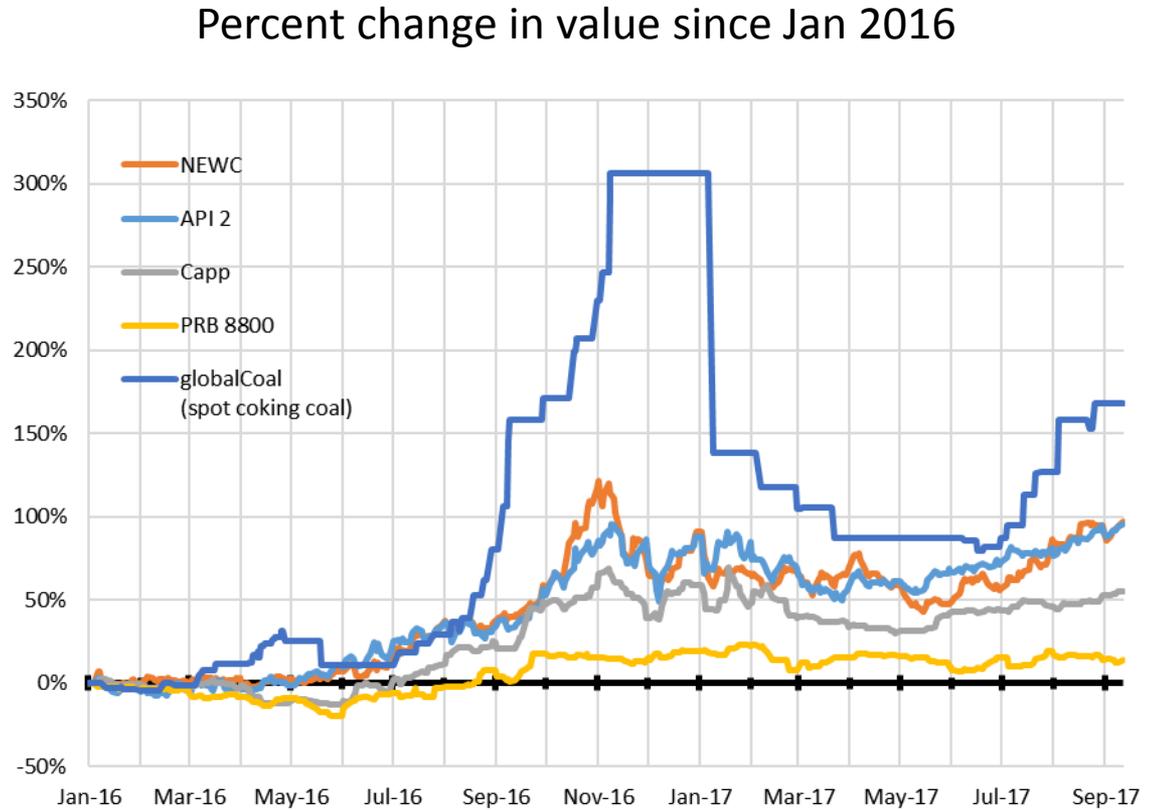
- Exports have played an important role for the U.S. coal industry—although that has changed through time
  - That role has become more influential for some regions
  - Export price influences domestic prices more in regions where exports are a larger share of the market
  - Makes life difficult because the variables affecting this market are greater than the domestic market
  - Highlights risks for producers and transporters

Source: U.S. Census and DTC Research (2017 represents DTC's forecast as of September)

First Half --2017	
Supply Region	Exports Share of Production
SAPP	85%
CAPP	49%
Rocky Mtns	21%
NAPP	17%
ILB	11%
PRB	2%

# Thermal Coal Price Rally Versus Coking Coal Rally

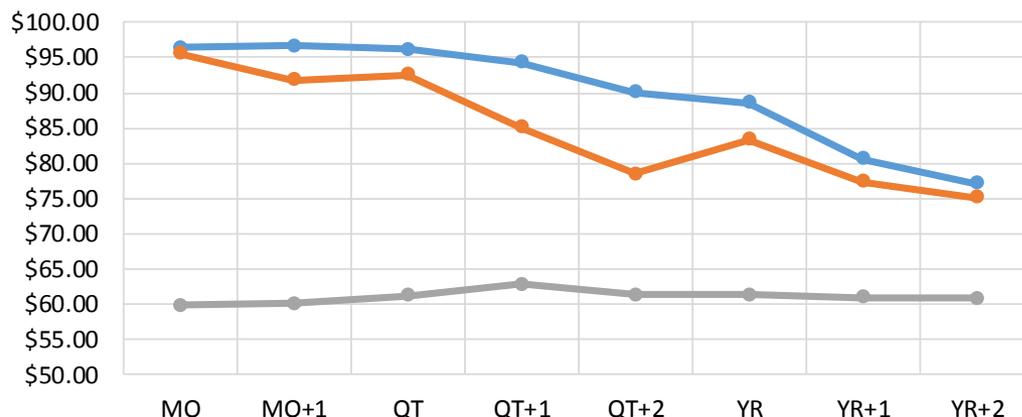
- Despite being in shadow of coking coal, thermal coal prices have had a nice run
- Prompt month prices are as follows:
  - API2 (coal delivered into Northern Europe) - \$93.35/MT
  - NEWC - \$96.45/MT
  - PRB 8800 - \$11.35/ton
  - NYMEX - \$57.50/ton
- NEWC at \$80/MT still is profitable for exports



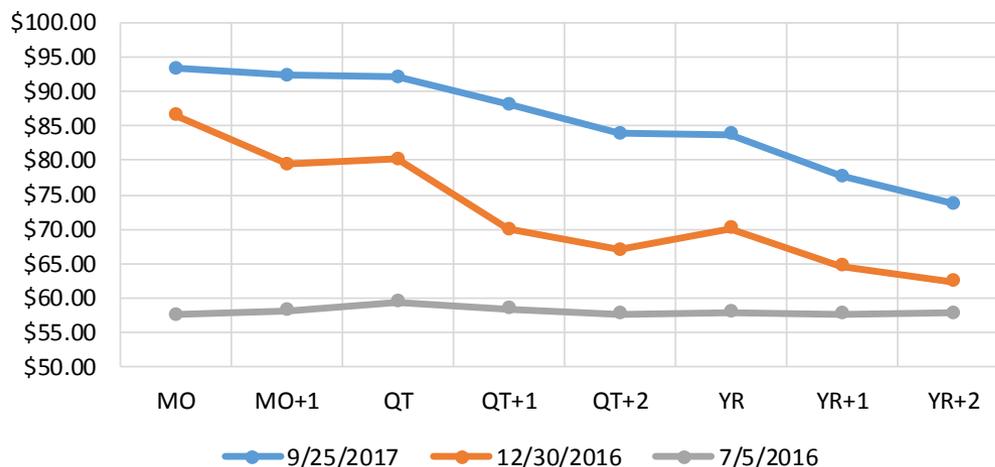
# Forward Prices Heavily Backwarddated

- API2 and Newcastle curves backwardated for last 14 months
- Spread was \$10/MT in March, but has steadily increased to ~\$16/MT
- Backwardated strip is good news for coal producers who otherwise would overproduce and destroy price rally
  - Capital is kept at bay
- Lack of capex will hinder new production
  - Wall St favors dividends, buybacks, but does not reward growth
  - High grading, maintenance, labor

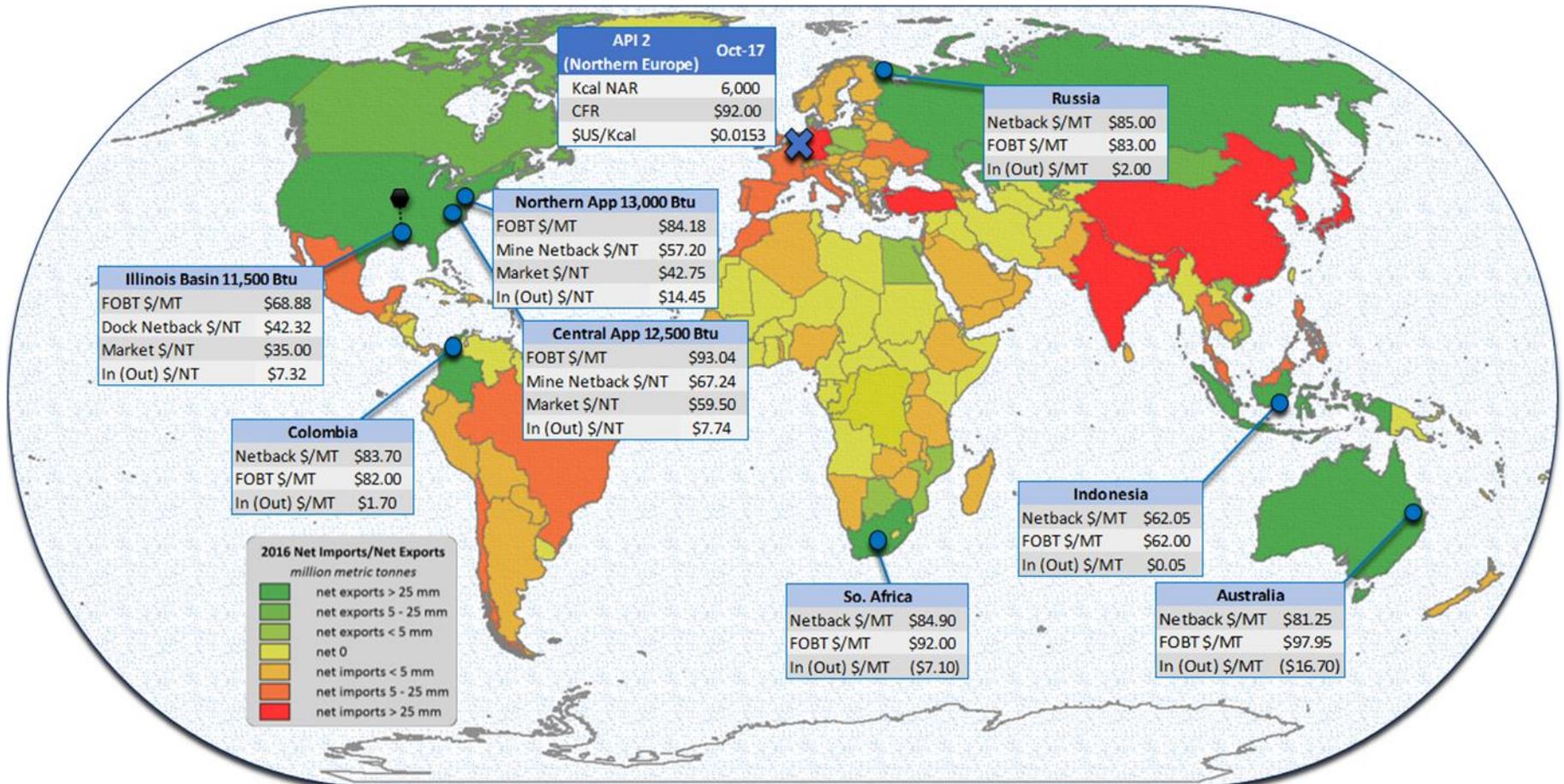
## Newcastle Forward Curves



## API 2 (Northern Europe) Forward Curves

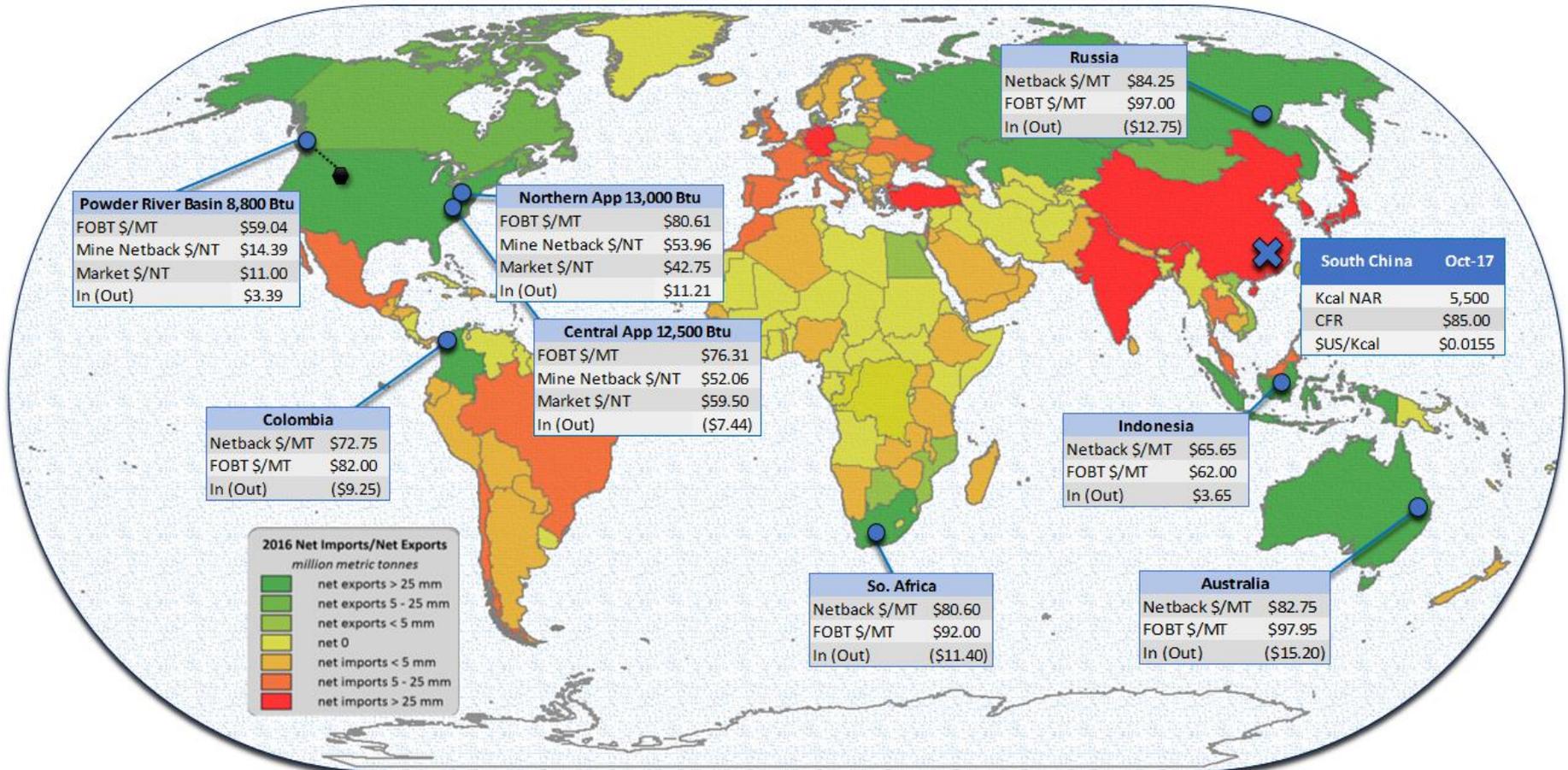


# Atlantic Basin Netbacks – U.S. ‘In the Money’



Sources: DTC Research, Evolution Markets, FIS, CME, GlobalCoal, IHS, Lloyd's List, Tullett Prebon, CoalDesk, AxsMarine, SSI, China Coal Resource

# Pacific Basin Netbacks – U.S. ‘In the Money’



Sources: DTC Research, Evolution Markets, FIS, CME, GlobalCoal, IHS, Lloyd's List, Tullett Prebon, Coaldesk, AxsMarine, SSI, China Coal Resource

# US Coal Supply and Demand

- Utility demand expected to remain flat
- Exports are primary growth driver for US coal demand
  - CC exports expected to rise 11 mm tons to 52 mm tons in 2017
  - Thermal exports expected to rise 17 mm tons to 36 mm tons in 2017
  - Thermal exports do not include Signal Peak

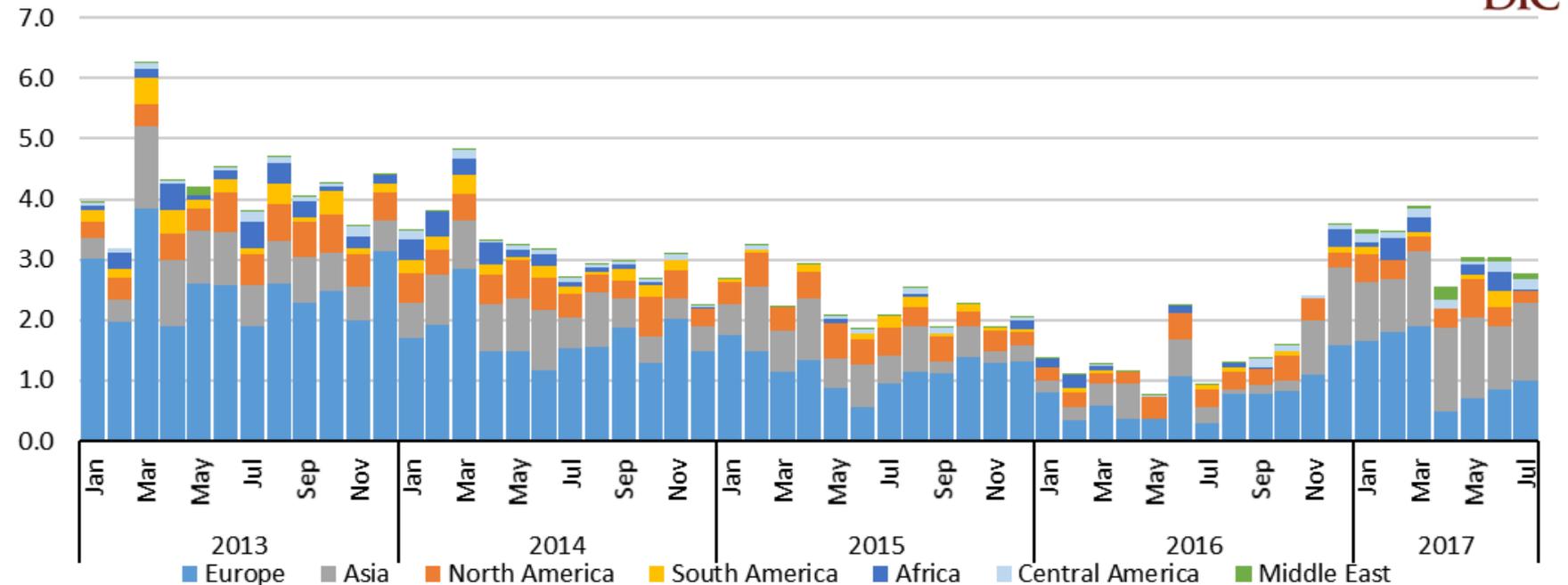
Supply (million short tons)	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017	2018
Central App	127.1	116.4	90.0	66.7	77	76
Colorado/Utah	41.2	41.9	33.3	26.4	30	29
Illinois Basin	132.2	137.2	123.8	98.4	106	104
Northern App	122.5	133.0	115.8	101.9	109	109
Powder River (WY, MT)	430.2	440.2	417.6	329.8	354	356
Other Regions	131.6	131.3	116.4	105.0	102	98
<b>Total US Production</b>	<b>984.8</b>	<b>1,000.0</b>	<b>897.0</b>	<b>728.2</b>	<b>778</b>	<b>772</b>
Waste Coal	11.3	12.1	9.9	8.7	9	8
Imports	8.9	11.3	11.3	9.8	8	8
<b>Total Supply</b>	<b>1,005.0</b>	<b>1,023.5</b>	<b>918.2</b>	<b>746.7</b>	<b>795</b>	<b>788</b>

Demand (million short tons)	2013 Actual	2014 Actual	2015 Actual	2016	2017	2018
Utilities	858.0	851.6	738.4	677.3	680.0	674.0
Coking Coal-Domestic	21.5	21.3	19.7	16.5	18.0	19.0
Industrial	43.1	42.9	38.5	34.6	34.0	33.0
Residential/Comm.	2.0	1.9	1.5	1.2	1.0	1.0
Exports/CC	65.7	60.1	46.4	40.8	52.0	48.0
Exports/Steam	52.0	37.2	27.6	19.0	36.0	33.0
Total Exports	117.7	97.3	74.0	59.8	88.0	81.0
<b>Total Demand</b>	<b>1,042.1</b>	<b>1,015.0</b>	<b>872.1</b>	<b>789.3</b>	<b>821.0</b>	<b>808.0</b>

Source: DTC Monthly Update

# US Thermal Coal Exports by Destination

million short tons



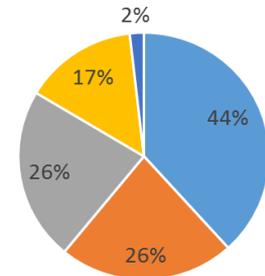
Sources: US Census and DTC Research

- Exports to Europe have always been reliable due to geography and quality
  - Nearly half of US thermal exports were to Europe
- Exports to Asia are important for western thermal (PRB and Rocky Mountain coal) and met
  - West Coast exports, important for thermal, is limited by port access

# US Coking Coal Exports by Destination

- Natural market: Europe
  - Transportation advantage
  - Quality fit with blast furnaces
  - Stable to declining market with few growth prospects
- Growth market: Asia

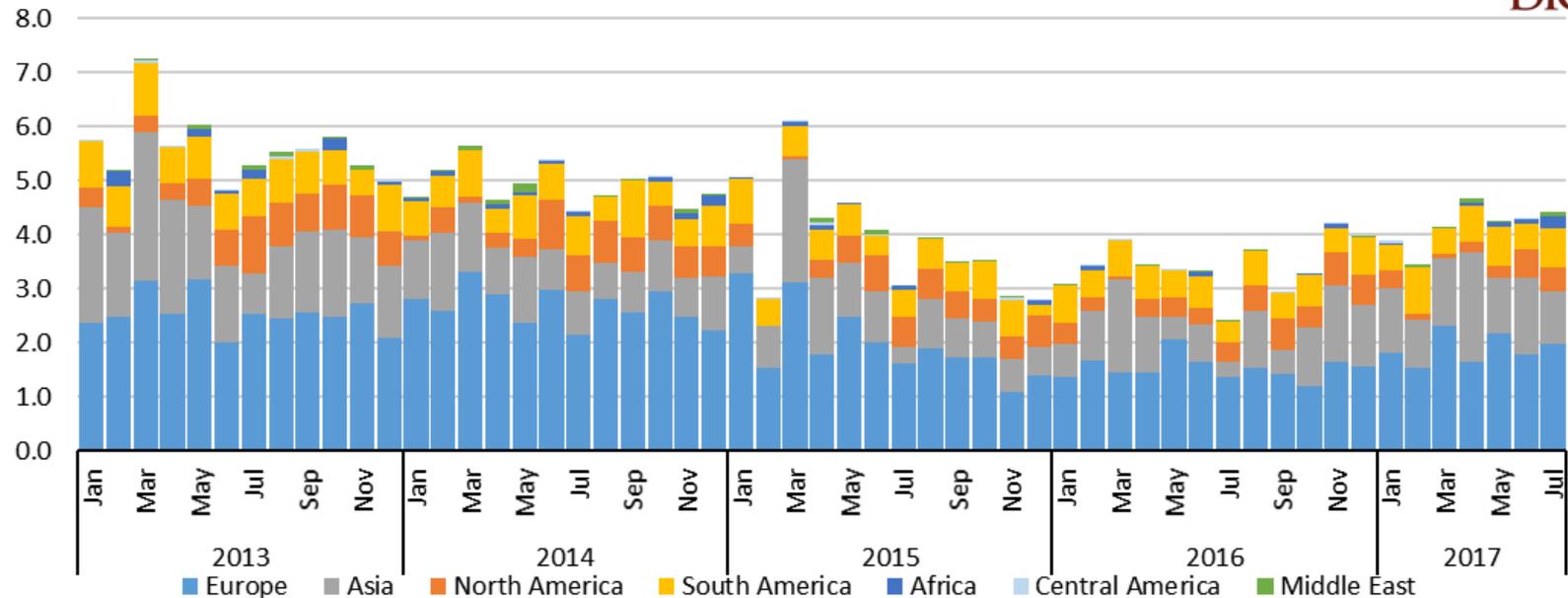
2016 US Met Coal Exports



■ Europe    ■ N America    ■ Asia  
■ S America    ■ Africa



million short tons



Sources: US Census and DTC Research

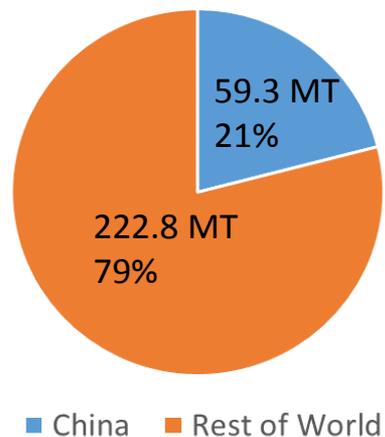
# Europe



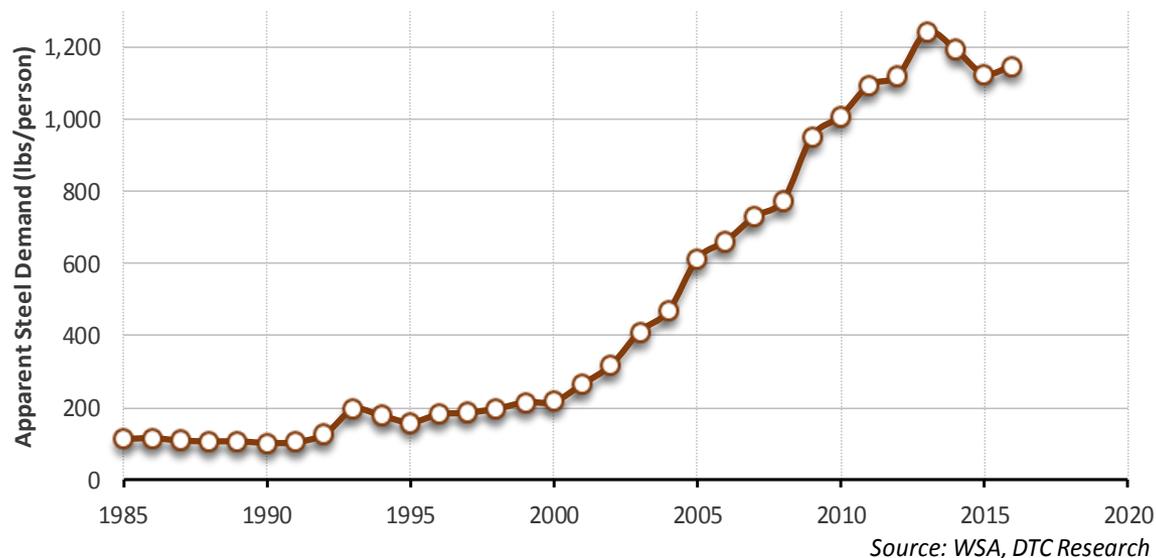
- Key importer of US coal
- Weak growth forecast
- EU stocking up ahead of winter season
- SCOTA favors higher CV coal
  - Opportunity for ILB coal, but high sulfur must be blended to meet standards
  - Blending can be done at export terminal, receiving terminal or at plant
  - Approx. 2 tons of low sulfur Russian coal blended with 1 ton of ILB yields product that works in European boilers
  - High sulfur ILB coal faces penalty of approx. \$15-\$20/ton compared to API2 price
- Ukraine production down 9% to 23.6 mm MT in 2017
  - 0.7 mm MT will be imported from US
  - 99% of thermal and 80% of cc currently imported from Russia
- Long-standing relationships between US and Europe
- High-vol coal in demand in Europe
- Australia making inroads into Europe

# China

Coking Coal Imports - 2016



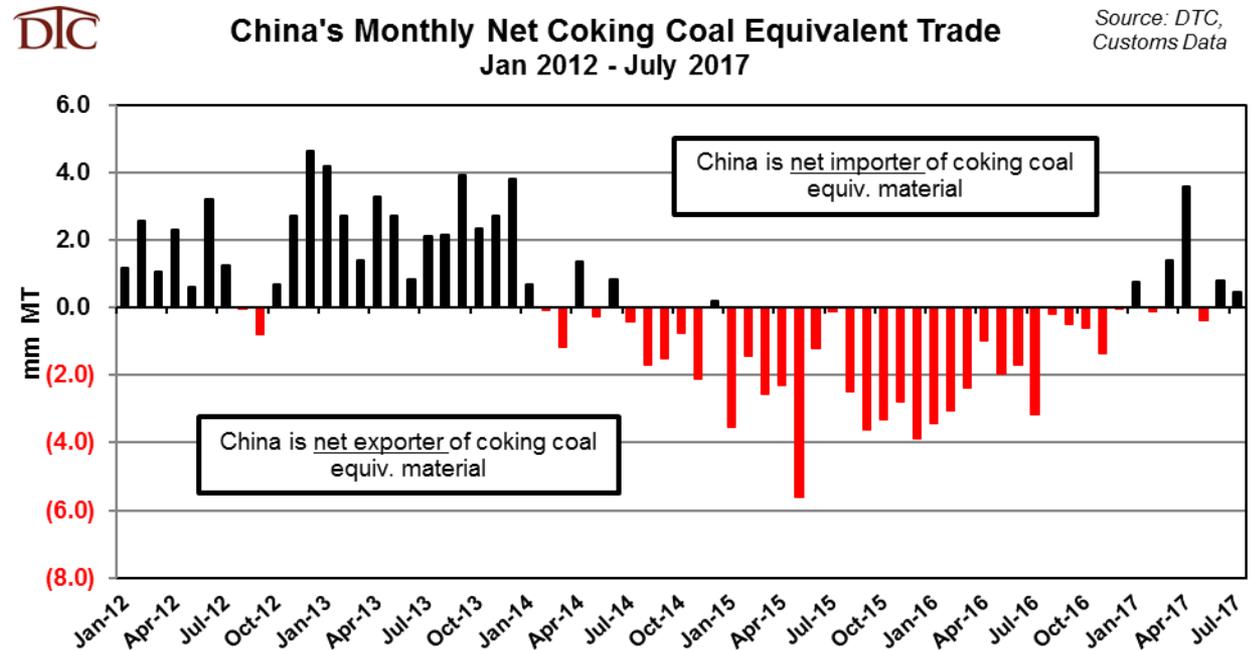
Chinese Apparent Steel Demand 1985 - 2016



- It's all about China
- China consumes well over half of world's coking coal
- Produces almost all of its domestic demand
- Imports make up gap between domestic production and consumption
  - Imports make up <10% of Chinese demand, but account for roughly 20% of global trade

# China is a net importer of coking coal equivalent

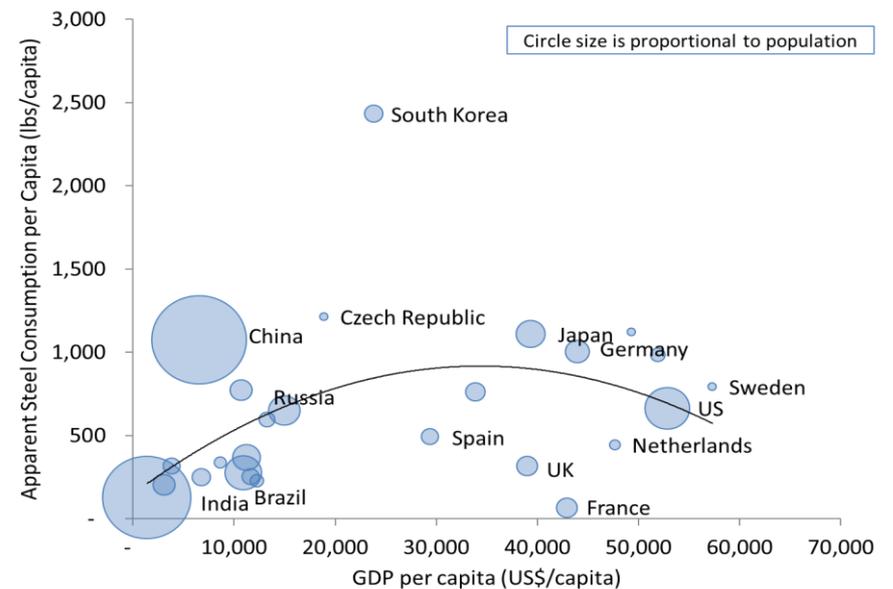
- Through July, YTD net CCE is 6.5 mm MT
  - Last year through July, YD net CCE was -16.6 mm MT
  - Over a 23 mm MT turnaround from last year
  - YTD coke exports through August were 5.3 mm MT versus 6.8 mm MT YoY
- Shift to net exporter began in 2014, then reversed in 2017
- Beijing is pushing to reduce excess capacity in steel and coal



$$\text{Net CCE} = \text{Coking Coal Imports} - \text{Steel Exports Equiv} - \text{Coke Exports Equiv}$$

# India

- Coal India Limited (CIL) production down 6% YTD
- Power station stocks average seven days of burn – lowest level in 3 years
- Thermal coal imports down 15% to 84 mm MT through July
  - Monsoon and high prices kept foreign coal out
  - Private generators awaiting drop in price due to fixed tariffs on power purchase agreements
  - Gov't-owned plants told to not take imports
- Top 3 CC importer
- Domestic transportation constraints
- Approaching rapid steel growth phase
- 60% of steel production with EAF



# Indonesia

- Largest supplier of thermal coal
  - Mostly to China and India
- Official target is 413 mm MT
  - Heavy rains all year
  - 1H17 production annualizes to 420 mm MT
  - Second consecutive year of declining production looming
- Domestic Market Obligation (DMO)
  - 121 mm MT in 2017
  - 240 mm MT in 2024
- 35 GW of new capacity coming online
- Rising domestic coal demand will reduce coal available for export
  - 366 mm MT exported in 2016
  - 160 mm MT forecasted to export in 2024

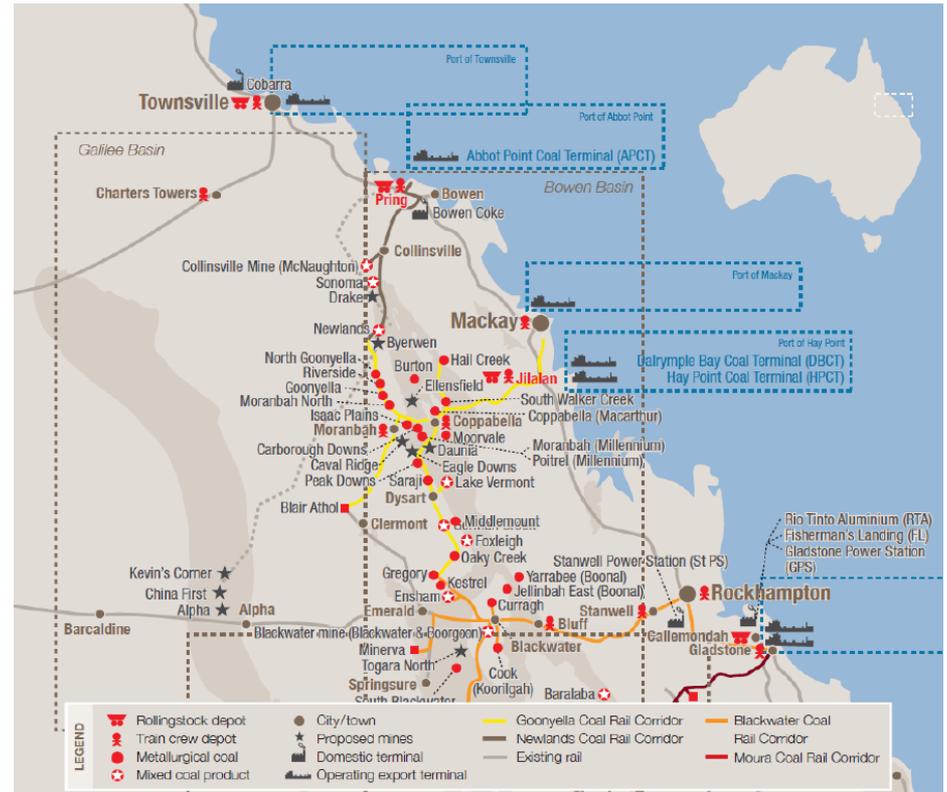
	2012	2013	2014	2015	2016
Target	407	431	421	425	419
Actual	412	474	458	461	455
Export	345	402	382	375	366
Domestic	67	72	76	86	89

# Colombia

- Increasing shipments to Asia and away from Europe/Atlantic Basin
  - Diverting SCOTA-quality shipments away from Europe
  - May exports to Asia approached 1 mm MT after zero exports to Asia in Feb
- Heavy rains earlier this year hampered output
- Mines are dealing with lower-grade seams
- Currently exporting about 3.5 mm MT to Europe each month
  - Down 40% from earlier in the year

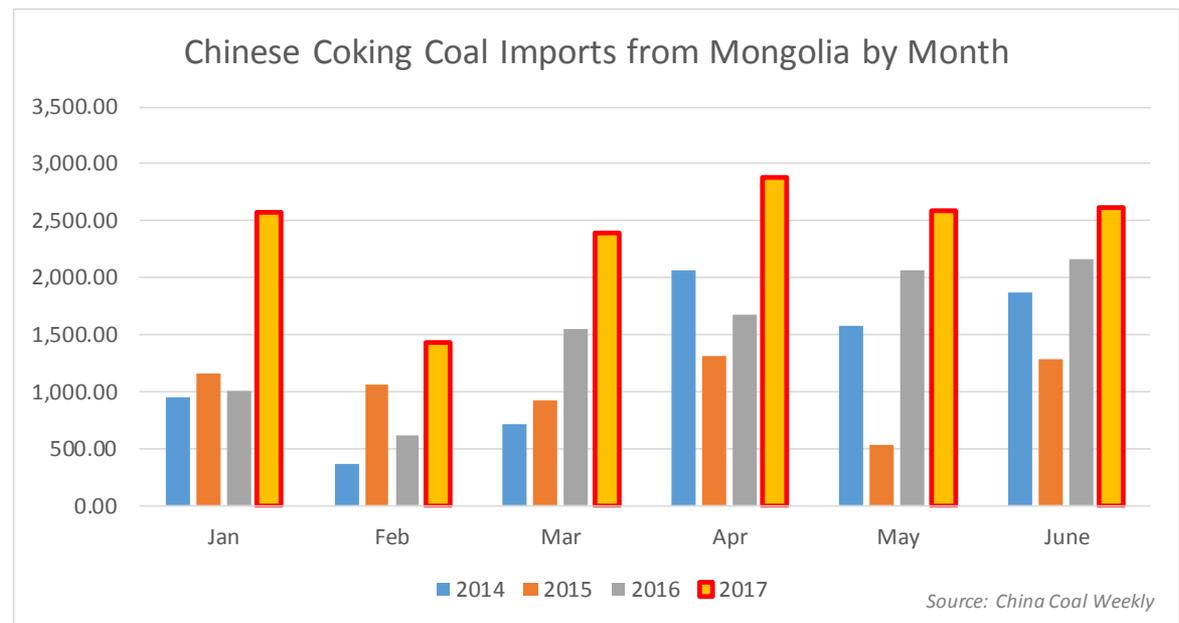
# Australia

- Responsible for 189 mm MT of seaborne cc exports
  - 65% of world seaborne cc trade
- Cyclone Debbie knocked out ~13.3 mm tons of production along Aurizon rail network
  - Queensland is closing Debbie losses at rate of ~1.3 mm MT/month
  - If rate holds, Debbie will have taken out ~6.5 mm MT of cc from seaborne market
- Labor issues at six Glencore mines
- Strong AUS dollar hurts producers



# Mongolia

- Significantly ramped up production this year
- CC exports annualize to 10.8 mm MT
- Only customer is China
- Mind-boggling traffic jams of coal trucks waiting to deliver coal to China
  - 120-150 km-long traffic jams at the border



# Summary

- Strong international demand, but weak domestic demand for cc and thermal
  - Asia continues to show demand strength with declining exports from key producers
    - Lack of western US terminal capacity hurts western producers
  - European demand is relatively weak, but is natural consumer for US coal
    - High sulfur blended with low sulfur
- Weak capital investment in new production
  - Wall St favors US dividends and buybacks, but does not reward growth
  - Reduced CAPEX – equipment, high grading, maintenance, labor
  - New mine development – limited at this time
  - Current ownership more focused on returns and providing value to shareholders
- Backwardated price curve
- Increased volume volatility will be difficult for production/transportation chain to absorb

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