

Surface Transportation Board – Rail Energy Transportation Advisory Committee Meeting

Performance Measures Subcommittee Update



September 20, 2016

Using EIA, AAR and individual railroad data sources, a data table is assimilated, and from it.....

Six coal-related dashboards, organized as follows:

1. Coal Production, Consumption, and Inventories Dashboard
2. Net Generation by Fuel Type Dashboard
3. Coal Exports Dashboard
4. Western Rail Coal Carloads Dashboard
5. Eastern Rail Coal Carloads Dashboard
6. Canadian Rail Coal Carloads Dashboard
7. Railroad Coal Train Speed Dashboard

Most dashboards have three sections:

- a. Left - historical and forecasted data (no forecasts of rail metrics)
- b. Middle - comparison for the most recent quarter (Q1 or Q2 as noted)
- c. Right - current YTD comparison versus the 5-year range

Performance Summary

Coal Production (2016 vs 2015)			
Appalachia:	Decreased 35.9 million tons		(-31%)
Interior:	Decreased 19.5 million tons		(-23%)
Western:	Decreased 70.6 million tons		(-28%)
Total Production:	Decreased 126 million tons		(-28%)

Coal Consumption (2016 vs 2015)			
Electricity/Power	Decreased 71.1 million tons		(-19%)
Retail/Other	Decreased 0.3 million tons		(-1%)
Met/Coke	Decreased 2 million tons		(-20%)
Total Consumption	Decreased 73.2 million tons		(-18%)

Coal Exports (2016 vs 2015)			
Met Coal:	Decreased 5.9 million net tons		(-23%)
Steam Coal:	Decreased 7.3 million tons		(-47%)
Total Exports:	Decreased 13.4 million tons		(-32%)

Coal Production MM Tons				
<u>2015</u>	<u>Appalachia</u>	<u>Interior</u>	<u>Western</u>	<u>Total</u>
Q1	62.4	45.2	132.7	240.3
Q2	54.7	39.8	118.0	212.5
Sum:	117.1	85.0	250.6	452.8
<u>2016</u>	<u>Appalachia</u>	<u>Interior</u>	<u>Western</u>	<u>Total</u>
Q1	44.3	36.9	91.8	173.0
Q2	36.9	28.6	88.2	153.7
Sum:	81.2	65.5	180.0	326.7
Tonnage	-35.9	-19.5	-70.6	-126.0
Percent	-31%	-23%	-28%	-28%

Coal Consumption MM Tons				
<u>2015</u>	<u>Electric Pwr</u>	<u>Other</u>	<u>Coke</u>	<u>Total</u>
Q1	196.3	11.0	5.2	212.4
Q2	174.6	9.6	5.0	189.2
Sum:	370.9	20.6	10.2	401.6
<u>2016</u>	<u>Electric Pwr</u>	<u>Other</u>	<u>Coke</u>	<u>Total</u>
Q1	152.4	11.0	4.2	167.6
Q2	147.4	9.3	4.0	160.8
Sum:	299.8	20.3	8.2	328.4
Tonnage	-71.1	-0.3	-2.0	-73.2
Percent	-19%	-1%	-20%	-18%

Coal Exports MM Tons			
<u>2015</u>	<u>Met</u>	<u>Steam</u>	<u>Total</u>
Q1	13.5	8.5	22.0
Q2	12.7	7.0	19.8
Sum:	26.2	15.5	41.8
<u>2016</u>	<u>Met</u>	<u>Steam</u>	<u>Total</u>
Q1	10.2	4.0	14.2
Q2	10.1	4.2	14.2
Sum:	20.3	8.2	28.4
Tonnage	-5.9	-7.3	-13.4
Percent	-23%	-47%	-32%

Coal Inventories MM Tons				
<u>2015 YTD</u>	<u>Electric Pwr</u>	<u>Bit</u>	<u>Sub-Bit</u>	<u>Total</u>
Q1	155	200.9	242.8	598.7
Q2	167	218.9	274.2	660.1
Sum:	322.0	419.8	517.0	1,258.8
<u>2016 YTD</u>	<u>Electric Pwr</u>	<u>Bit</u>	<u>Sub-Bit</u>	<u>Total</u>
Q1	194.3	236.9	321.4	752.6
Q2	185.5	247.3	314.4	747.2
Sum:	379.8	484.2	635.8	1,499.8
Tonnage	57.8	64.4	118.8	241.0
Percent	18%	15%	23%	19%

Performance Summary

Railroad Carloads (2016 estimate versus 2015)

Burlington (BNSF):	Decreased 384,364 carloads	(-34%)
Union Pacific:	Decreased 182,939 carloads	(-29%)
Kansas City Southern:	Decreased 9,011 carloads	(-14%)
Norfolk Southern:	Decreased 96,099 carloads	(-24%)
CSX Transportation:	Decreased 119,763 carloads	(-31%)
Canadian National:	Decreased 25,338 carloads	(-29%)
Canadian Pacific:	Decreased 2,685 carloads	(-2%)
Total Carloads:	Decreased 820,199 carloads	(-29%)

Car Originations / *KCS Receipts (000 Carloads)

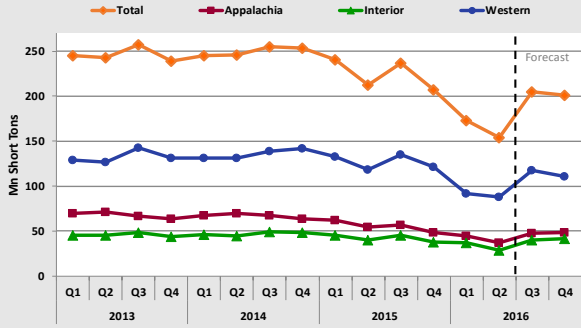
<u>2015</u>	<u>BNSF</u>	<u>UP</u>	<u>*KCS</u>	<u>NS</u>	<u>CSX</u>	<u>CN</u>	<u>CP</u>	<u>Total</u>
Q1	601,488	354,565	40,777	208,679	201,616	45,192	64,210	1,516,527
Q2	540,883	268,667	25,494	199,907	188,477	40,923	61,334	1,325,685
Sum:	1,142,371	623,232	66,271	408,586	390,093	86,115	125,544	2,842,212
<u>2016</u>	<u>BNSF</u>	<u>UP</u>	<u>*KCS</u>	<u>NS</u>	<u>CSX</u>	<u>CN</u>	<u>CP</u>	<u>Total</u>
Q1	396,864	224,275	30,652	159,914	137,474	29,740	62,626	1,041,545
Q2	361,143	216,018	26,608	152,573	132,856	31,037	60,233	980,468
Sum:	758,007	440,293	57,260	312,487	270,330	60,777	122,859	2,022,013
Carloads	-384,364	-182,939	-9,011	-96,099	-119,763	-25,338	-2,685	-820,199
Percent	-34%	-29%	-14%	-24%	-31%	-29%	-2%	-29%

Average Train Speeds (MPH)

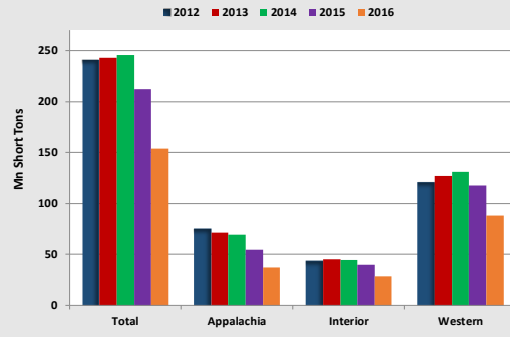
<u>2015</u>	<u>BNSF</u>	<u>UP</u>	<u>KCS</u>	<u>NS</u>	<u>CSX</u>	<u>CN</u>	<u>Avg</u>
Q1	18.9	26.2	26.3	16.1	17.8	25.6	21.8
Q2	20.3	25.7	26.8	16.1	17.8	25.8	22.1
<u>2016</u>	<u>BNSF</u>	<u>UP</u>	<u>KCS</u>	<u>NS</u>	<u>CSX</u>	<u>CN</u>	<u>Avg</u>
Q1	26.2	29.8	27.8	18	17.9	25.9	24.3
Q2	24.7	27.3	28.3	17.8	17.6	25.9	23.6

U.S. COAL PRODUCTION, CONSUMPTION, AND INVENTORIES DASHBOARD

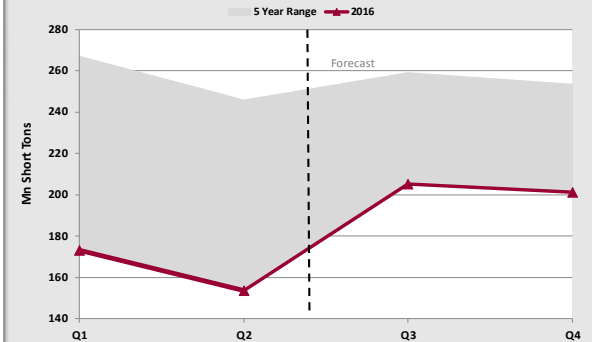
Historical and Forecasted Production



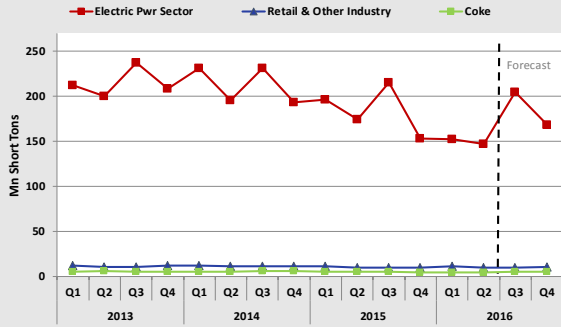
Q2 Production Comparison



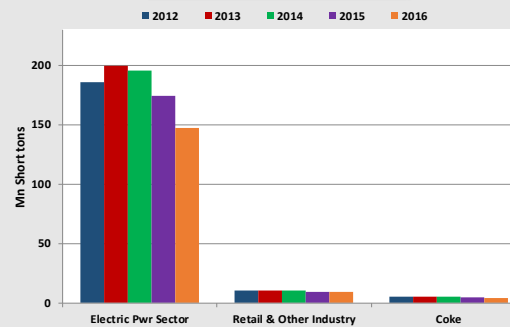
2016 Production vs 5-Year Range



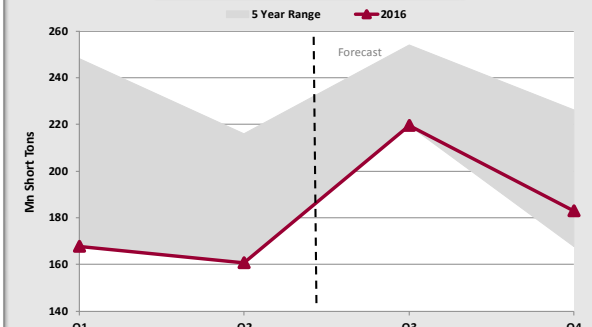
Historical and Forecasted Consumption



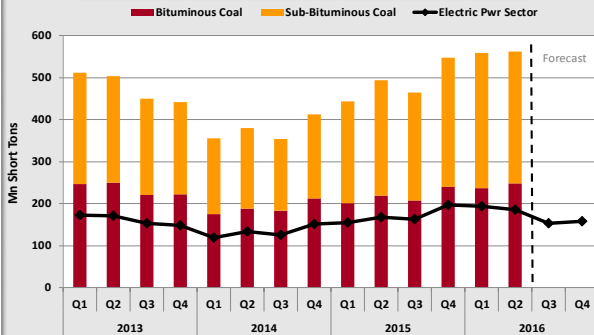
Q2 Consumption Comparison



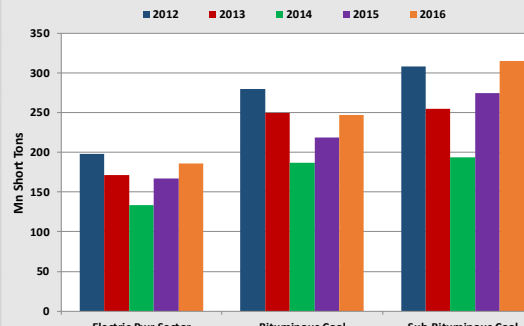
2016 Consumption vs 5-Year Range



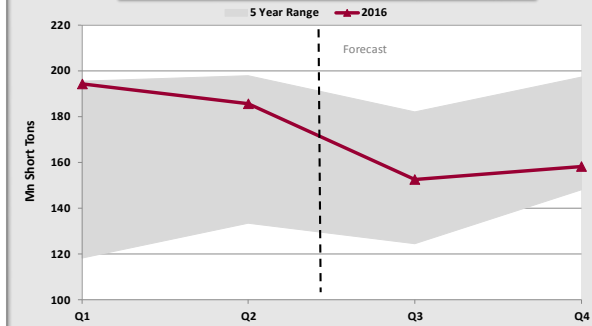
Historical and Forecasted End-of-Period Inventories



Q2 End-of-Period Inventories Comparison

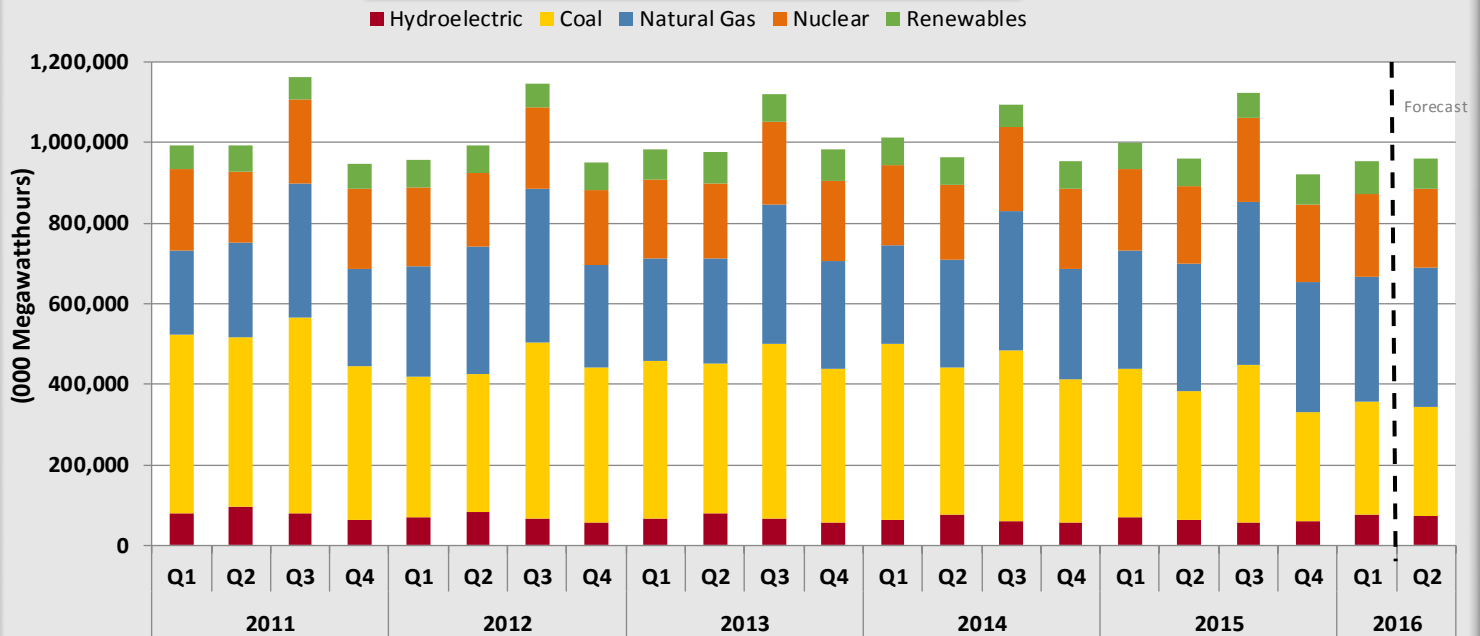


2016 End-of-Period Inventories vs 5-Year Range



NET GENERATION BY FUEL TYPE DASHBOARD

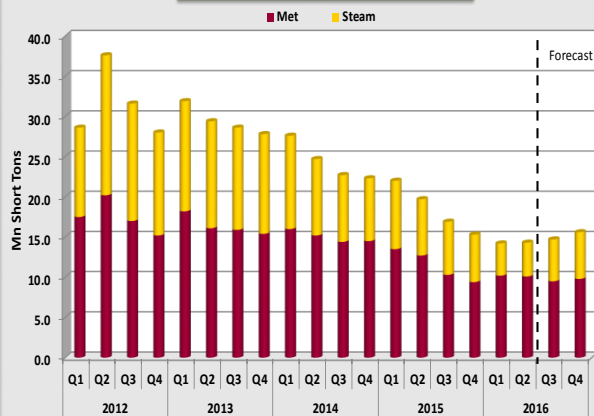
Historical Net Generation by Fuel Type



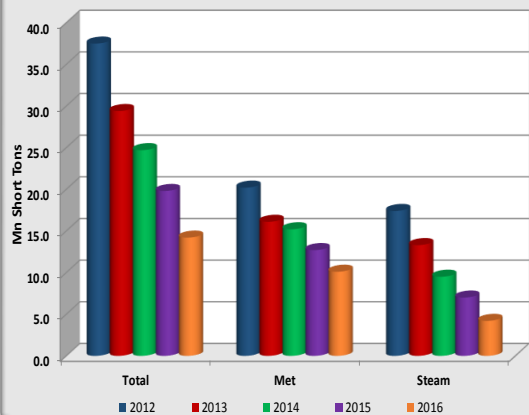
Source Data: EIA

U.S. COAL EXPORTS DASHBOARD

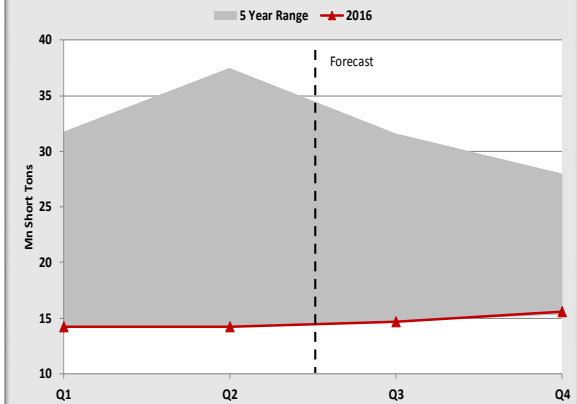
Historical and Forecasted Exports



Q2 Exports Comparison



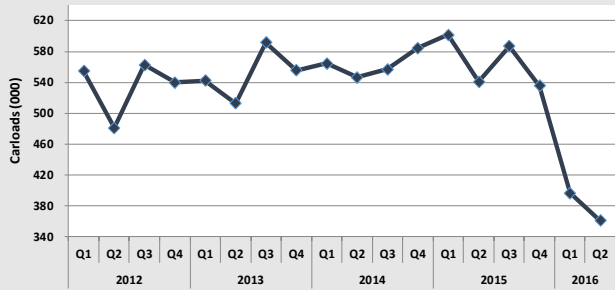
2016 Exports vs 5-Year Range



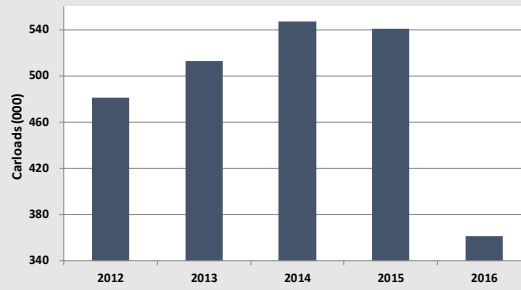
Source Data: EIA

WESTERN RAILROAD COAL CARLOADS DASHBOARD

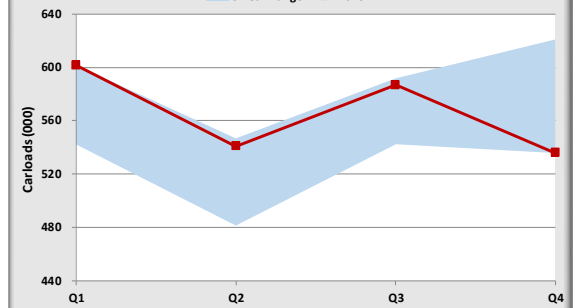
BNSF Historical Originations



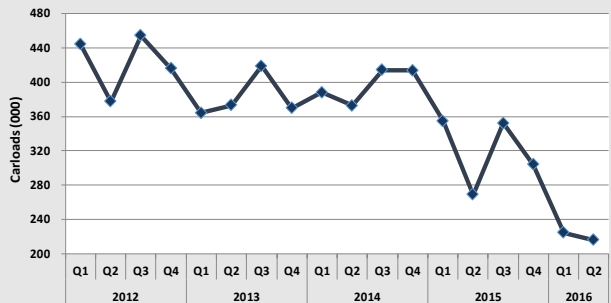
BNSF Q2 Originations Comparison



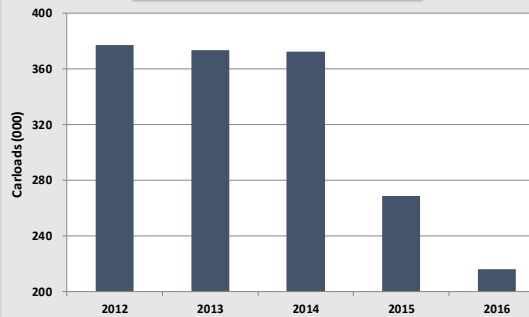
2015 BNSF Originations vs 5-Year Range



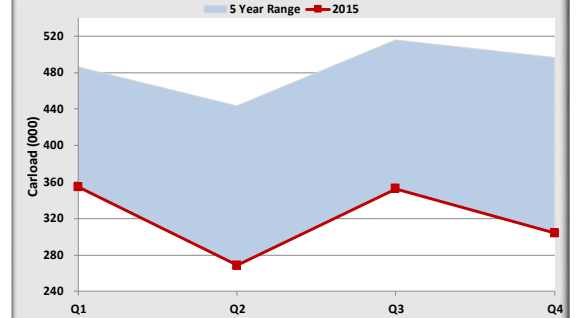
UP Historical Originations



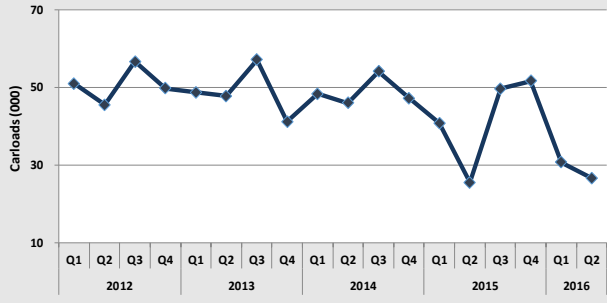
UP Q2 Originations Comparison



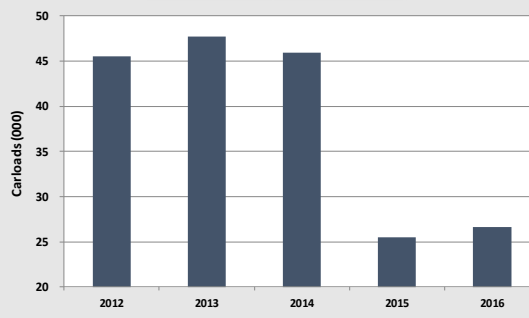
2015 UP Originations vs 5-Year Range



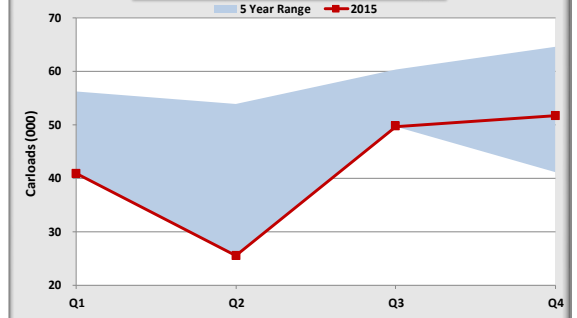
KCS Historical Receipts



KCS Q2 Receipts Comparison



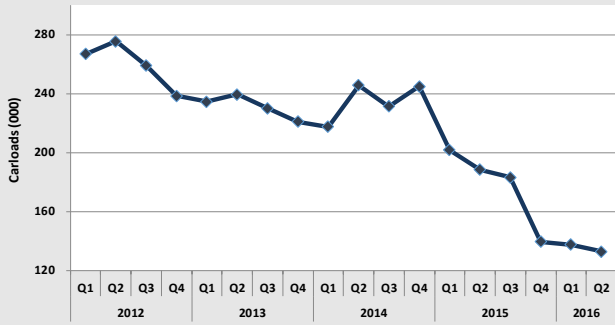
2015 KCS Receipts vs 5-Year Range



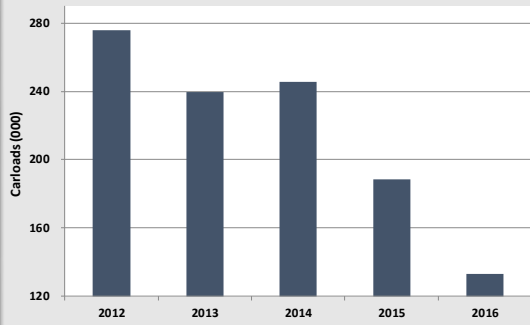
Source Data: AAR, BNSF, UP, KCS

EASTERN RAILROAD COAL CARLOADS DASHBOARD

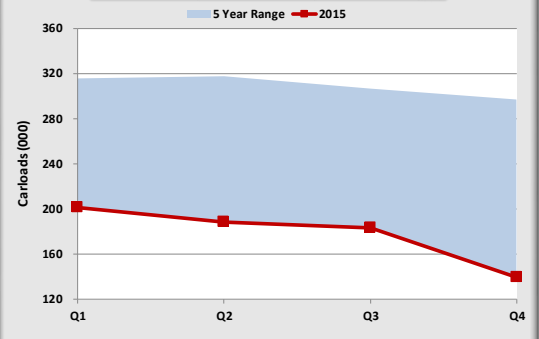
CSX Historical Originations



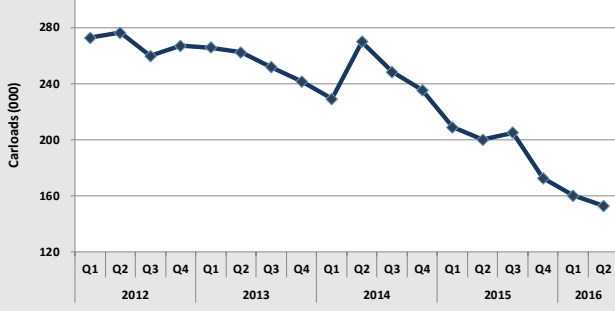
CSX Q2 Originations Comparison



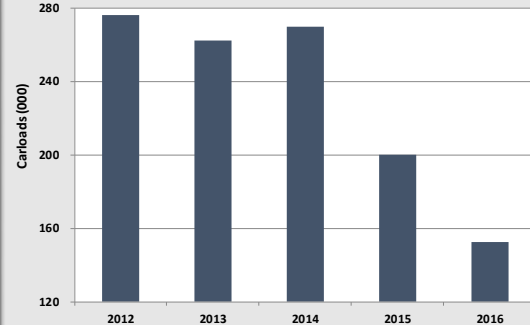
2015 CSX Originations vs 5-Year Range



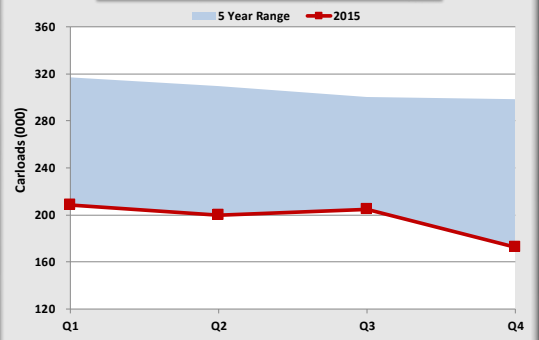
NS Historical Originations



NS Q2 Originations Comparison



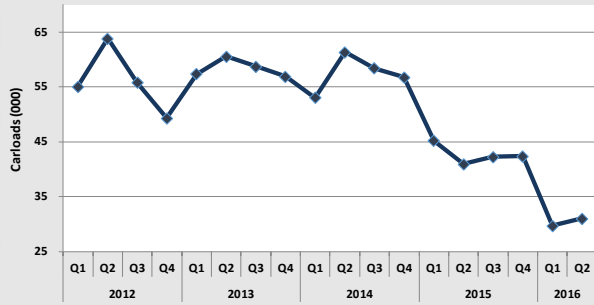
2015 NS Originations vs 5-Year Range



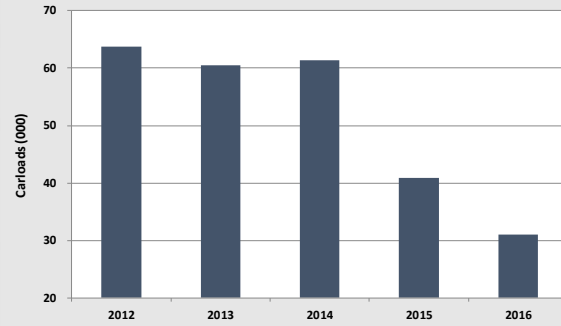
Source data: AAR, CSX, NS

CANADIAN RAILROAD COAL CARLOADS DASHBOARD

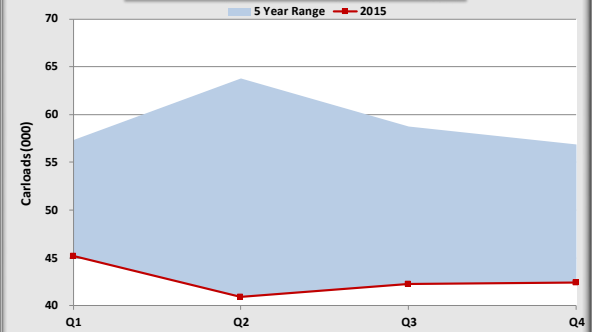
CN Historical Originations



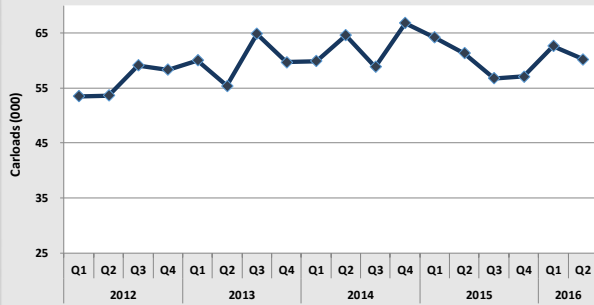
CN Q2 Originations Comparison



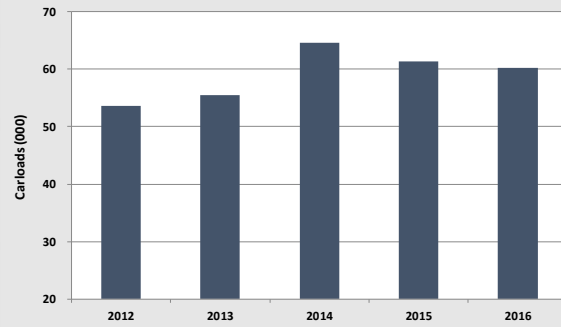
2015 CN Originations vs 5-Year Range



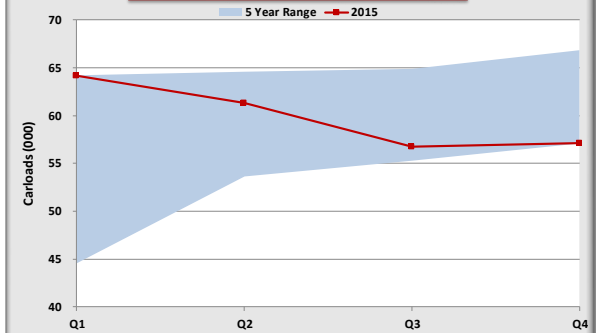
CP Historical Originations



CP Q2 Originations Comparison



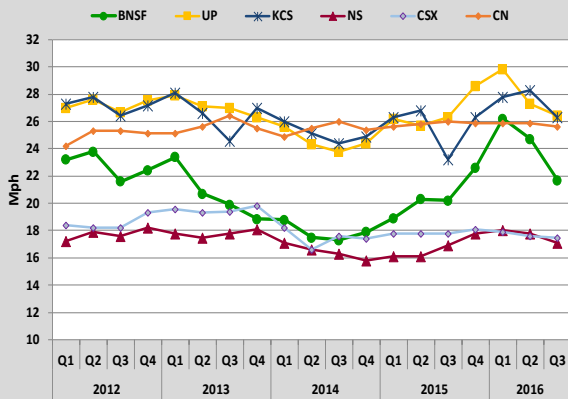
2015 CP Originations vs 5-Year Range



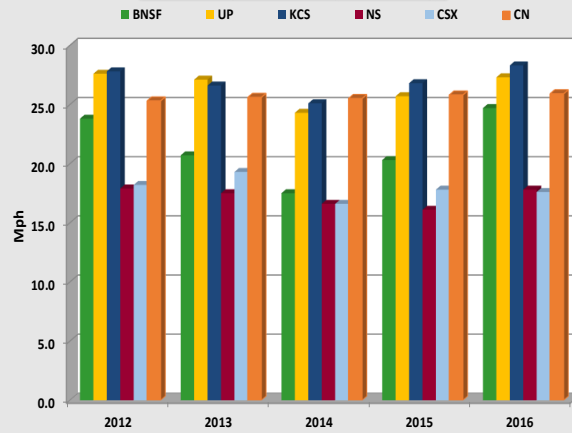
Source Data: AAR, CN, CP

RAILROAD COAL TRAIN SPEED DASHBOARD

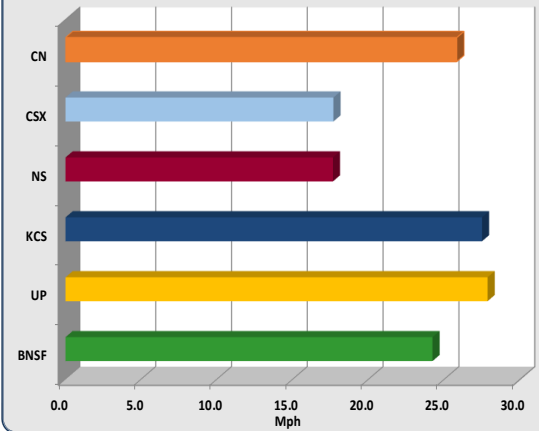
Historical Coal Train Speed



Q2 Coal Train Speed Comparison



2016 Average Coal Train Speeds



Source Data: AAR, BNSF, UP, KCS, NS, CSX, CN, CP