RAILROAD WEEK IN REVIEW

May 20, 2022

"As pig iron becomes more costly, scrap prices will follow. The cost of raw materials such as ferrous scrap and imported pig iron, both key ingredients for EAF steelmakers, have surged after the invasion of Ukraine, pushing up steel prices. — majesticsteel.com

"Most anthracite reserves are found in the five counties of Schuylkill, Carbon, Northumberland, Lackawanna and Luzerne Counties. The Anthracite coal fields extend 50 miles east and west and 100 miles north and south covering approximately 484 square miles. Current estimates show four to six billion tons of reserves of anthracite left in the region." —- Pennsylvania Anthracite Coal Council

"For years, the Pennsylvania anthracite producers have complained about the unfair competition as Russian anthracite, which is not subject to our strict environmental and labor laws, was dumped here at a much lower cost." — Wayne Michel, President, Reading & Northern Railway

The food and fertilizer gap arising from the Ukraine conflict has been well-documented. It is bound to affect the non-Class I railroads. The March 2022 Railinc Short Line Index shows ag products representing some 14 percent of non-Class I revenue units other than intermodal. (I exclude the nearly 50,000 boxes because they're mostly two or three properties and not representative of that community as a whole.)

For the North America Class I railroads, the broad STCC 28 industrial chemicals group accounted for 14 percent of total non-intermodal units. Of that, fertilizer was seven percent. Railinc data has STCC 28 chemicals at five percent of total shortline non-intermodal units, some 54,000 units. Applying the AAR seven percent average implies total shortline ferts in the neighborhood of 4,000 carloads — about one percent.

STCC 33 and 34 metals run about seven percent of total Railinc non-intermodal units whereas grain, field crops, grain mill, STCC 20 foods, and ferts comprise perhaps 16 percent of non-Class I carloads. Which tells me the metals group plus the grain/ferts sectors amount to maybe a quarter of all Railinc carloads. So maybe we better look at what Ukraine will do not only to ag but also steel. Here's why.

Steel-making in the US is largely turning to electric-arc furnaces, or mini-mills, now accounting for some 70 percent of steel production, according to recyclingtoday.com . They use pig iron or scrap steel for feed stock, the former being preferred for its high purity, known chemistry, and ease of storage. As a rule, pig iron makes up 10-15 percent of the metallic charge, but can run as high as 60 percent. And two-thirds of the pig iron imported into the US comes from Russia/Ukraine.

Anthracite coal plays a big role in EAFs, being used as source of carbon. It is preferred to other coals because because it is 86-97 percent carbon and generally has the highest carbon content of all ranks of coal, from bituminous (45-86 percent carbon) to lignite (25-30 percent carbon).

When pig iron is in short supply or relatively expensive, EAFs turn to scrap steel as a feed stock. But because the iron content and quality can vary from load to load, and it doesn't stockpile as well, more of it is needed per ton of output, and that takes more anthracite than does a ton of pig iron-based steel. And Russia is a major source of imported anthracite.

The good news is that ferrous scrap is in good supply. Americans tend to trade up automobiles and "white goods" (stoves, refrigerators, washers, etc.) more frequently than elsewhere. Those durables are recycled into scrap metal that can replace Russian pig iron. As for increased anthracite tonnage, northeastern Pennsylvania is the only source.

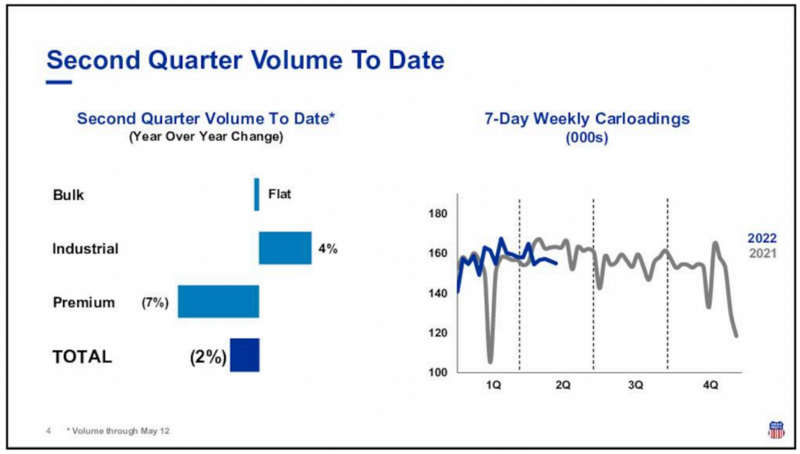
The 400-mile Reading & Northern (RBMN) is the dominant player in the region. Anthracite tonnage this year is expected to be twice what it was in 2021. The railroad is buying more rapid-discharge to accommodate the increasing traffic. Much of this is relatively short-haul, going to a Delaware River port and the goal is to have almost a shuttle service of unit trains that can be turned quickly.[1]

The world economic posture now points to the United States sourcing much of its own heat-and-eat materials, from coal to corn to ammonium nitrate and potash. And, as we heard at the recent STB railroad service hearing, shippers cited the non-Class I railroads as being particularly adept at knowing their customers and crafting service responses to meet their supply chain needs in the first-mile/last-mile portions of their moves. Whether the Class Is will be as adept in the line haul remains to be seen.

Union Pacific second quarter industrial carloads are leading the pack. CFO Jennifer Hamann, presenting at the Bank of America Global Transportation conference, provided a review of Q2 performance to date and a peek at what she sees coming up. Bulk was

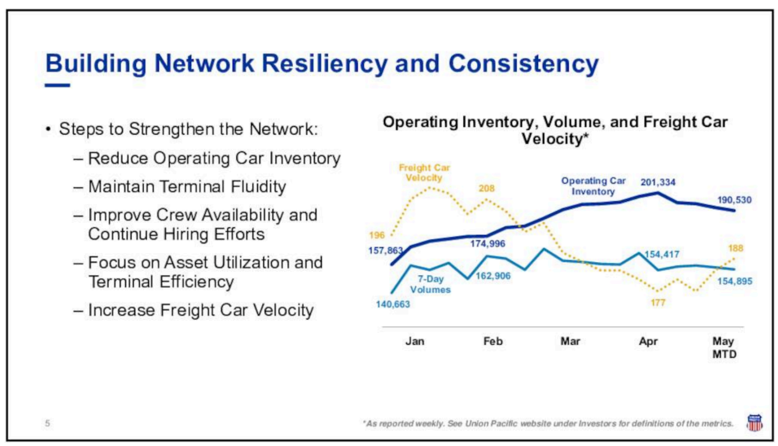
[1] RBMN has also set up anthracite rail-truck transloads in Virginia, Florida, Illinois, Indiana, Missouri, and South Carolina — helping railroad customers reach their distant customers by rail, reducing logistics costs, and improving service. — *Week in Review*, November 6, 2020

essentially unchanged as gains in coal offset losses in grains. Premium posted a loss in international intermodal boxes, offsetting growth in the domestic space. Automotive was flat, though sequential improvement is encouraging.



On the industrial front, aggregates, chemicals, non-metallic minerals, and the metals group all saw double-digit increases year-to-date.

Regarding train service quality, “We're adjusting transportation plans and working very proactively with our customers to reduce freight car inventories. The key metrics that we are watching bottomed out in April and are starting to see steady slow improvement.



“In particular freight car velocity has improved and is currently running close to 190 miles per day on a seven day basis. And with over 550 employees in the training pipeline, we are set to graduate over 300 new hires in the early months of summer.

“So while we're not declaring victory, certainly there's plenty of hard work ahead of us. Happily, there is positive momentum building as we execute our recovery plan.” Looks good.

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