



Welcome to the new RAIL Solution railroad industry update. In this periodic communication we attempt to keep you informed of key developments and place our Steel Interstate advocacy in context. The **Newsletter** is also attached as a PDF to facilitate downloading and reviewing on a wider variety of electronic devices.

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INTO THE FUTURE – A TRANSPORTATION LOOKING GLASS  
C. K. Marsh, Jr.

Rail Solution continues to develop and seek promising ideas to advance the concept of the STEEL INTERSTATE, a high-speed rail system built near the general routes of the Interstate highway system. After all, most of the 20<sup>th</sup> century Interstates were built parallel to the mainline rail routes which themselves developed between 1850 and 1915.

With the malaise currently enveloping the major railroads, it is clear that business as usual is not the way forward for a better and healthier railroad industry. With the sharp drop in car loadings and softening container traffic, we are seeing many carriers return to

historic “slash and burn” practices of bygone years. Employees are being furloughed by the thousands and rolling stock is stored on idle track nationwide. Thousands of valuable locomotives stand in long lines around major terminals (BNSF had 3818 units stored in February), and track rationalization in the coalfields plus secondary lines continues aggressively. New marketing efforts are hard to find.

One of the historic backbones of railroad business, coal, continues to shrink, never to return in this era of abundant natural gas, regulatory pressures from the EPA, growing solar and wind electric generation, and political pressures generated by NIMBY and BANANA.

The popular solution offered by the railroads is to grow intermodal business and, indeed, it has been on a sustained upward trend for several decades. However, railroads now confront three serious problems with intermodal. First, the revenue, and by extension, profit produced by containers is far less than that produced by traditional carload business such as coal, grain, lumber, chemicals, plastics and a host of other heavy, bulk commodities. A recent Norfolk Southern report indicated 2015 revenue per container averaged \$624 versus \$2474 for the carload business. The point to point nature of double stack and TOFC trains cannot overcome the much higher carload revenue and resultant profit even with the expense of yards, locals and classification yards for individual carloads..

The second issue is many railroads, especially the Norfolk Southern and CSX, are trying to compete with over-the-road trucking who use the 60 mph interstate routes between major United States markets and from and to border crossings. Only a part of truck freight is susceptible to rail diversion in a 30 mph point to point COFC/TOFC rail system aggravated still more by intermodal terminal delays and drayage. BNSF and UP seem to have overcome the 30mph barrier with double tracks and superior alignments in the west. Not so in the south and east. All the railroads are progressing with better reliability on train schedules but velocity is generally elusive, especially in the south. What is needed is point to point rail speeds of 60 to 70 mph to counter the 60 mph trucking service that flows by us automobile drivers every minute or two on Interstate 10, 40, 81 and 95.

Improved rail time in the east and southeast can only come with major upgrades of track alignment that is generally on the same curves and hills that hosted them when built over 120-years ago. The STEEL INTERSTATE features double tracks on improved rights of way on or very near the existing tracks. Rolling stock, locomotives, and signals on many routes are already state-of-the-art, but still on an alignment from the 1880s or earlier.

The third issue is the slow growth and/or actual shrinkage of heavy industry in the United States. We are steadily moving toward a consumer goods economy and away from making things, especially heavy things like steel, cement, glass, aluminum, copper and similar cornerstone rail commodities. Where is the aggressive effort by the rails to capture more of such profitable carload traffic?

The railroads have intentionally abandoned the retail transportation business in favor of wholesale practices with unit trains, point to point intermodal operations, and less and less single car business, unlikely to return. The infrastructure for single car business is largely gone.. Thus the rail carriers must become near perfect with Reliability and improved Velocity, the so called RV Factor. Their future business success hangs on the RV Factor. That includes the existing carload business and the anticipated growth in intermodal activities.

Yet, what are they doing about it? Without major alignment and capacity improvements the rails are doomed to live in their own 30 mph world while the government continues to build, pave, repair and promote a 60 mph boulevard for truckers who daily achieve the RV Factor for their customers. Nothing short of the railroad STEEL INTERSTATE will produce the RV Factor essential to containers, indeed even carloads, to match over-the-road economics and service. The railroads must grow or fade into irrelevance

As always, the bottom line in any economic situation is money. In a subsequent newsletter we will propose a private financial system to provide the capital to build the STEEL INTERSTATE while providing a capitalistic financial return to investors. Stay tuned and welcome to our new Newsletter.

## NEW BUSINESS, NEW INFRASTRUCTURE

By David Foster

Rail industry veteran and guru Jim McClellan has commented in print on the current dearth of rail traffic occasioned by the decline in coal, oil, and raw materials shipment. He echoes our sentiment that the industry needs to develop new business, and raises the idea of transporting water by rail.

RAIL Solution Director Robinson Foster in Oregon cites the example of 100 truckloads daily of bottled water moving by truck on Interstate 5 from the Mt. Shasta area to southern California. Two other water operations are under development in the same area. So the suggested rail haul of water seems timely.

In *Trains* Magazine, March, 2016, p. 47, McClellan says, "You don't laugh at anything anymore. There are no crazy ideas ...in the quest to replace lost coal revenue. They may prove to be crazy, but you don't laugh at anything." So I have two ideas of my own to suggest.

1) LNG. No fewer than three major pipeline companies are currently engaged in efforts to permit and site large-diameter gas pipelines across Virginia to move the surplus of natural gas from the fracking fields of Pennsylvania and West Virginia to the East Coast for export.

The incentive, of course, is that world gas prices are much stronger than those in the U.S. Let's move the gas by railroad instead! This actually makes more sense than might first appear.

Shipping the gas overseas will require liquefied natural gas (LNG) tankers. So, since the gas must be converted to LNG anyway, why not put the LNG plants in the origin gas production areas? Then the railroads can ship the LNG in special LNG tankcars to the port, where it can be transferred directly to the LNG ships.

Here are some of the advantages I see for such a plan:

- Putting the LNG plants in the midst of production fields means the ships could call at any port without having to put separate LNG conversion facilities at each one. Currently there is only one such port, operating in Louisiana.
- Cooling and compressing natural gas to create LNG is very energy-intensive, but energy costs at the well-head would be a lot lower than along the populous East Coast.
- Flexibility to ship to any port (or domestic destination) would be an important marketing advantage for gas producers, one that a fixed, buried pipeline could not offer.
- Railroad-operated port and dock facilities already exist that could be adapted for LNG handling.
- Though there is not currently a fleet of railroad LNG tankcars, some have been built already as fuel tenders to supply gas to railroad experimental gas-powered diesel locomotives, so prototypes exist. And LNG tankcars are already in use in Europe.
- Railroad lines and rights-of-way also already exist, and there is adequate extra shipping capacity on these lines because of the decline in coal.
- No lengthy period of permitting and construction would be needed, and the potentially adverse environmental impacts, together with the inevitable lawsuits, facing large gas pipelines could be avoided.

2) Truck Ferry. I have essayed previously on the need for a more nimble rail intermodal concept to supplement the current double-stack container business model. Millions of truckloads travel the nation's highways. These trucks could be carried on trains, which have compelling energy and environmental benefits compared to over-the-road trucking. Hauling trucks that already have sold their service to shippers represents an obvious way for railroads to increase traffic.

The truck ferry concept is similar to a boat ferry. Entire trucks drive onto a train of specially-designed flatcars, and at destination they drive off again to continue their road trip. Drivers are accommodated aboard the train in passenger cars featuring sleeping, eating, and lounge space. Drivers can arrive at the end of their 11-hour mandatory down time rested and ready to drive again instead of having their trucks sitting still in roadside rest areas or truckstops. This can result in a significant productivity increase for truckers.

Again this is something in widespread use in Europe but not in the United States. Services are operated by Hupac, Ökombi, and others, which you can Google, along with “rolling highway” to find out more. I have visited these facilities and see no technical reason why such a service concept could not be deployed in the U.S. But it is vital to the success of any truck ferry operation that the railroads’ speed, reliability, and cost be competitive with over-the-road driving.

In spite of the current downturn in rail traffic, capacity does not exist in many highway-competitive rail corridors to run a reliable truck ferry operation. Central to RAIL Solution’s advocacy for a core national network of high-capacity rail lines, known as the Steel Interstate, is provision for all kinds of rail service including truck ferry type operations, standard rail freight, and passenger trains This more robust rail infrastructure .is a prerequisite for large scale truck diversion from highways.

## RAIL SOLUTION MISSION AND GOALS

### *RAIL Solution Mission :*

*To promote the establishment of a North American Steel Interstate System, an upgraded core network of North American railways, operated for profit by private enterprise, with grade-separated, multi-tracked, electrified infrastructure that achieves highway competitive speeds and significantly increases the reliability, accessibility, and capacity for moving freight and passengers, and that strengthens the economy and protects the environment by creating an oil free, safe, efficient, cost effective, low impact, intermodal backbone of the transportation system.*

### *RAIL Solution Goals:*

- 1. Develop, refine, and communicate the Steel Interstate concept;*
- 2. Promote an operating demonstration of the concept in an appropriate corridor such as the I-81/I-40 Corridor linking the Northeast and Mid-South;*
- 3. Establish the North American Steel Interstate Coalition - a combination of industry, developers, supporters and rail transportation customers; and*
- 4. Encourage innovative partnerships between the public sector and the American railroad industry to identify private and public sources of capital, as necessary and appropriate, to invest in rail infrastructure upgrades that are sufficient to significantly reduce costly highway expansion, maintenance, and congestion.*



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