

Intermodal Offers A Greener Way of Shipping

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As companies evaluate new ways to reduce freight costs as well as their carbon footprint, alternative transportation mode options should be considered when moving freight long distances. While trucking remains the most dominant mode of shipping product domestically, intermodal freight transport offers opportunities for freight savings and reduced emissions, especially when transporting products over distances of 500 miles or more.

Intermodal shipping is the process wherein multiple modes of transportation partner to provide integrated door-to-door services. For example, trucks are used to deliver goods from a warehouse or manufacturing facility to a train depot and from a train stop to a final customer locale while freight trains are used to transport the cargo the longest distance over high-volume rail corridors. Optimizing the relative strengths and efficiencies of each transport method, intermodal can help reduce cargo handling, damage and loss, enabling freight to be transported more securely and at lower overall costs.

Also, the U.S. Environmental Protection Agency (EPA) reports that for shipments over 1,000 miles, using intermodal transport can cut fuel use and greenhouse gas emissions by as much as 65%, relative to truck transport alone. A truck transporting 40,000 lbs from Boston to Los Angeles produces approximately 4.35 tons of carbon emissions. The same 40,000 pounds shipped via intermodal rail produces only 1.75 tons of carbon emissions.

Intermodal transportation can, in essence, help reduce a company's carbon footprint. The EPA estimates that every ton-mile of freight that moves by rail instead of by highway can reduce greenhouse emissions by two-thirds. This is important as companies work to reduce their car-

bon footprint to comply with environmental regulations and meet their own corporate sustainability goals.

As the volume of inbound cargo, especially from Asia, continues to increase, intermodal offers an alternative to the highways. For shipments across the border, intermodal can help reduce border congestion and pollution, especially when transporting U.S. freight into Mexico. As paperwork can be submitted electronically and approved prior to trains reaching the border, inbound shipments can cross into Mexico without stopping at border crossings, eliminating the time associated with customs and freight clearance. And once a shipment is underway, all movement can be tracked by a third party until it reaches its final destination.

How to Ship Intermodal

As intermodal can be implemented for bulk commodities in tank containers as well as traditional packaged freight in box containers, a variety of goods can be transported using this transportation mode. A chemical company, for example, can deliver product in ISO tanks by truck to a rail terminal, where freight is transferred to railcar and processed for delivery to a final destination. An investigation commissioned by the International Tank Container Organization into the environmental performance of intermodal tank containers reveals that the tank container leaves a carbon footprint that is almost 50% less than that of an equivalent drummed shipment on certain long-haul routes.

Rail carriers in the U.S. and neighboring countries have worked to upgrade equipment, improve shipping schedules, reduce loading and unloading times, and increase the number of lanes to support multiple delivery locations. The U.S. intermodal rail system extends throughout the United States, touching every major port with some coast-to-coast service

offerings that are faster than truck. Mexico has a good rail system extending across most of the country, with well-established rail connections at the U.S. border. Canada has two major railroads that run coast-to-coast: the CN and the CP.

Is Intermodal Right For You?

To determine if intermodal transportation is an option for your enterprise, business unit leaders should collaborate with their logistics group or third-party consultants to evaluate supply chain economics and cycle times. Typically, the longer the haul, the more cost-effective intermodal transportation becomes over alternative freight shipment modes. However, modified lead times, resulting in new re-ordering points, may be trade-offs that must be considered with your customer base.

It typically takes eight days to cross the country using intermodal methods. Rail transit time to transport chemical products from Chicago to Mexico City is about four to six days.

The EPA reports that the economic benefits of intermodal ground freight service are maximized over long hauls, where the fuel and cost savings from the rail segment of the trip can be high enough to recoup the extra fuel and handling costs to transport and transfer trailers and containers between trains and trucks.

Typically, shipping liquid bulk products via intermodal can save shippers upwards of 40% vs. over-the-road tank trucks. As an example, a chemical manufacturer in South Carolina that ships bulk chemicals to the Pacific Northwest is reportedly saving approximately \$4,000 per load by sending the product in intermodal ISO tanks instead of going in the traditional tank truck over the road for the full passage.

