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# Logistics issues may cost chemical firms \$79B



Logistics constraints could cost US chemical producers \$79 billion in excess inventories, capital spending, and increased operating costs during the next decade, consulting firm PricewaterhouseCoopers says (PwC) in a new report.

The report highlights growing concern by chemical producers that transportation infrastructure is lagging their multibillion-dollar investments in expanded production of synthetic resins and other commodities.

“The US business of chemistry is growing like never before, but limitations across all modes of transportation are getting in the way of fully realizing this American manufacturing success story,” said Cal Dooley, president of the American Chemistry Council, which commissioned the report.

Since 2010, chemical companies have announced 264 new US projects totalling more than \$161 billion in capital investment, according to the council.

The investment is driven by low-cost shale gas that has turned the US into the world’s low-cost manufacturer of resins and other chemicals. Almost two-thirds of the active projects are in Texas and Louisiana, and most of the new production is expected to come on stream in 2017 and 2018, the PwC report said.

But much of the manufacturing savings could be cancelled by supply chain inefficiencies. “Unless resolved, logistics shortcomings across primary modes of transportation (truck, rail, marine container) will greatly affect the chemical industry and its customers,” PwC warned. During the next ten years, the report said, logistical inefficiencies could force companies to spend \$22 billion on excess inventory, \$23 billion on added capital spending for equipment and infrastructure, and \$29 billion on increased operating costs.

PwC’s suggested solutions include better sharing of information among supply chain partners on production volumes and timing, infrastructure investment, and network planning.

The 68 chemical companies surveyed by PwC expressed concern about looming problems for truck, rail and marine container transportation as annual chemical shipments could increase by 36 million tons by 2020. Of this, 16 million tons will be in packaged shipments of products such as synthetic resins. The remainder will be olefins and methanol shipped in pipelines or as bulk cargo.

The increased shipments, much of which is destined for export, will strain truck, rail and port capacity, PwC said.

Trucking issues include the impact of federal hours-of-service regulations on driver availability; difficulty in finding truck drivers who can meet security certification; availability of trucks, trailers and chassis; and delays on already congested roadways, especially in petrochemical production centres in Texas and Louisiana.

PwC suggested that the industry finance new drivers’ background checks and licensing, simplifying the hiring of military veterans with trucking experience, designating port drayage as intrastate transportation in order to increase the number of qualified port drivers’ and creating heavyweight corridors into Port Houston.

Sixty-five percent of manufacturers surveyed said they expect rail delays to worsen as volumes increase. They said track, storage-in-transit, and switching capacity already are tight in many areas, particularly in Houston and Chicago.

Chemical companies own or lease many of the railcars that carry their products and PwC estimates that these railcars average four to five turns a year. Increased volume could require \$20 billion in additional capital investment by 2025 in additional railcars, onsite storage track and new rail spurs, PwC said.

PwC modelled current and future volumes and system capacity, and found that overall rail delays could more than double by 2025 and add \$14 billion to inventory costs. The report cited Baton Rouge, Corpus Christi, Houston, and New Orleans as areas of particular concern.

Producers are seeking all available options for containerized shipment of resins and other chemicals that are bagged, palletized, and stuffed into containers for exports.

Gulf ports are close to production centres but are served by smaller ships and fewer vessel services than container ports on other coasts. Manufacturers also are concerned about road infrastructure, including truck weight limitations in Texas, and capacity and yard congestion at local packaging facilities and rail delays around the ports, PwC said.

These constraints have led some manufacturers to plan supply chains that use the East and West coasts, despite lingering uneasiness about the possibility of labour disruptions like those that gridlocked West Coast ports in 2014-15. The use of “suboptimal” overland routings could cost producers \$10 billion in the next ten years, PwC said.

Joseph Bonney, Senior Editor Journal of Commerce | 2 March 2017

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