The Urban Truck Port Network - Concept Summary
Steve Viscelli & Bill Holloway

Trucking, the United States' most critical freight transportation mode, is facing the combined challenges of increasingly stringent emissions regulation, growing traffic congestion, highly volatile and increasing fuel prices, and a shortage of workers. There is broad agreement among the trucking industry, its customers, government, and policy experts that meeting these challenges will require coordinated efforts by the public and private sectors.

One of the most vexing challenges of the current truck freight model is that many trucks must both navigate congested urban areas for pick-up and delivery and cover long distances between cities. The different operational requirements - speeds, braking, acceleration, and maneuverability - in these different settings has led the typical long-haul tractor trailer to be a jack of all trades and a master of none. While there are a variety of available vehicle and fuel technologies, as well as operational changes, that could dramatically increase the efficiency of trucks in urban areas and on long haul trips, in many cases, changes made to improve efficiency in one setting, degrade it or have little value in the other. Strategic public investment in the urban-rural transition to allow for specialization - long-haul trucks for long-haul trips and short-haul trucks for short-haul trips, could dramatically improve adoption of efficient technology and operations - cutting the costs, emissions, and congestion impacts of trucking.

A network of multi-purpose urban truck ports located outside of congested urban areas would facilitate a variety of operational and technological changes to improve efficiency, safety, and driver retention, yielding substantial benefits to private carriers, taxpayers, and society at-large.

Urban truck ports would:

1. Help drivers avoid congestion by enabling loads arriving in urban areas during congested periods to be held for off-peak delivery,
2. Improve fuel efficiency and safety by facilitating the transfer of trailers between tractors designed specifically for travel in urban and rural areas,
3. Spur innovation by enabling the use of new fuels and technologies by acting as a central hub for fuel and maintenance,
4. Improve vehicle utilization by allowing multiple driver shifts to use the same tractor,
5. Improve driver retention by allowing long-haul drivers to avoid congestion and creating more regular route and short haul driving jobs that get drivers home more often,
6. Reduce roadway expansion needs by removing trucks from urban highways during peak periods, and
7. Cut overall emissions by reducing congestion on urban roadways and increasing truck fleet efficiency.

The benefits of transitioning to more efficient vehicles and operations are clear, but nearly every report has concluded that widespread adoption of the best technologies is unlikely to occur due to market failures. Among other issues, such as a lack of capital, these market failures are related to the urban/rural transition and its impact on the return on investment in technology.

The development of an urban truck port network will help to alleviate these market failures, setting the stage for a variety of efficiency gains by allowing for vehicle and driver specialization, providing staging areas for off-peak pickup and delivery, and creating hubs for the introduction of new vehicle and fuel technologies.