NORTHEAST CLEAN FREIGHT CORRIDORS

July 18, 2016

PREFACE

Northeast Clean Freight Corridors (NECFC) is an initiative of the Northeast Diesel Collaborative (NEDC), and was formed to facilitate the adoption of cleaner fuels, technologies and strategies by freight carriers in the Northeast by coordinating across agencies, sectors, boundaries and modes to focus on key freight corridors. Participation and support for NECFC[1] comes from federal, state and local environment, transportation and energy agencies; the I-95 Corridor Coalition; U.S. Department of Energy (DOE) Clean Cities Coalitions; port authorities, trucking associations, railroads, and shippers; alternative fuel and clean technology companies; and academic, nonprofit and consulting groups.

The NECFC initiative derives in part from the U.S. DOT Volpe Center 2014 New England Transportation Forum: Freight Issues, at which state transportation commissioners called for improved cross-jurisdictional coordination to address freight needs and impacts.[2] In 2015, the NECFC was formed at the freight-focused NEDC Partners Meeting[3] in Providence, Rhode Island during the Meeting's Clean Corridor Congress session. Since its inception, NECFC has staged a series of educational and coordinating webinars that lead up to, a Northeast Regional Clean Corridor Meeting to be held at RPI on November 2 – 4, 2016 in Troy, New York.

NECFC was formed to provide a regional platform for coordination among state and local agencies to promote cleaner and more efficient freight corridors. An early focus is to support Northeast state and local agencies interested in submitting applications in late summer 2016 under the Fixing America's Surface Transportation (FAST) Act Section 1413 for designation as Alternative Fuel Corridors. FAST Act Section 1413 signifies that Congress and FHWA see the essential connection between maintaining an economically competitive, dynamic and complex freight system, and operating that system in the most environmentally sustainable manner possible. In the Northeast as much as anywhere else in the U.S., the vital corridors that connect people and businesses to goods and services are of growing concern in terms of their functioning, impacts and resilience.

[1] https://www.northeastdiesel.org/freight.html#CleanFreightCorridorsWorkgroup
[2] https://www.volpe.dot.gov/event/new-england-transportation-forum-freight-issues
[3] https://www.northeastdiesel.org/pdf/2015partnersmeeting/nedc-2015-partnership-meeting-pic-overview.pdf

NORTHEAST CONTEXT, TRENDS AND OPPORTUNITIES

Nowhere in the U.S. is it more important to take a corridor and network view of transportation than in the Northeast, given the high proportion of end-to-end trips crossing multiple state lines; high and growing population density, and the goods movement demand it generates; existing and predicted roadway congestion; and exposure of urban populations to nearby transportation emissions. The Northeast is a powerhouse of density and economic output, producing 20 percent of the nation's GDP with 17 percent of the population, on just 2 percent of the nation's land area. Over the next generation, the Northeast will add 17 million new residents. This population growth will demand an increase in passenger and freight transportation infrastructure capacity, as well as mitigation of criteria air pollutant and greenhouse gas emissions from vehicle engines. Forecasts of a 30 to 40 percent increase in freight volumes for the Northeast by 2040 are typical, and that picture will be dominated by truck movements in terms of whole-trip, last-mile, dray, and intermodal hauls.

While most Northeast peak period highway congestion currently occurs in metro areas, by 2040 congestion will spread to inter-city corridors. A budding trend toward greater use of east coast ports by the marine shipping and cruise industries will likely generate additional highway congestion given how little on- or near-dock rail exists. Addressing bottlenecks to improve capacity and reduce emissions will be difficult in this region, due to congested networks and therefore the risk of merely moving the bottleneck further down the line. Establishing much-needed expanded truck parking capacity will also be difficult due to prevailing land-use policy and close juxtaposition of disparate uses, but potentially made easier if idle-minimization ("truck stop electrification") infrastructure were provided.

In sum, capacity expansion to improve freight and passenger flows across all modes can only partly address the problems created by demand. Providing alternative fuel infrastructure along key Northeast corridors and at key freight facilities will be essential to promote the adoption of advanced transportation technologies powered by natural gas, electricity, hydrogen fuel cells, and propane, as well as to encourage the use of idle reduction technologies for trucks, locomotives, and ships to shut down main and/or auxiliary engines during layovers at origin/destination facilities and en route. Federal, state and local agencies and businesses in the Northeast have built a number of natural gas fueling stations and electrified parking facilities over the last decade, but these efforts have not been coordinated from a corridor and regional perspective; some are underutilized and some are no longer in operation. The Transportation Climate Initiative of the Northeast and Mid-Atlantic states has in recent years focused state priorities and resources on building out a network of electric charging stations and spaces for passenger vehicles. The same need exists to coordinate among Northeast states, across disciplines, and hand-in-hand with shippers and carriers to site new alternative fuel infrastructure for freight fleets along corridors where it will be beneficial both to the supply chain and the environment.

This is where NECFC comes in. As Northeast state Department of Transportation (DOT) agencies and Metropolitan Planning Organizations (MPOs) develop and renew freight plans, state Department of Energy (DOE) agencies target their next energy infrastructure investments, and state Department of Environmental Protection (DEP) agencies seek to develop workable approaches to reducing freight emissions, NECFC provides a regional platform for communication and collaboration across all agencies and partners.

CORRIDOR PRIORITIES

The following are corridors that the NECFC has discussed for potential designation under the FAST Act Section 1413. State and local agencies eligible to apply may choose to nominate other corridors, or corridor sections. The NECFC will make every effort to facilitate coordination across disciplines and boundaries to make any application for designation as complete and worthwhile as possible.

I-95 Corridor

The I-95 highway corridor, including its feeder and parallel rail and marine routes, are a primary focus for NECFC. Many sections in the Northeast are low-performing in terms of trip variability, delay and total travel time, exacerbating emissions. Long- and short-haul trucks require refueling and lay over on and near the corridor. Some public alternative fuel and idle reduction infrastructure already exists on the corridor, and some carriers that ply the corridor (including partners in U.S. Environmental Protection Agency's SmartWay Transport Partnership) have indicated readiness to use such infrastructure for their fleets if a more plentiful network of fueling and layover facilities were available. I-95 runs through heavily populated areas of Rhode Island, Connecticut, New York and New Jersey likely to be in marginal or moderate non-attainment of the new 8-hour ozone standard, and most of the Northeast suffers from a high per capita rate of asthma.

I-84, I-90, I-87, I-78, and I-80 Corridors

Other corridors with potential as multi-state priorities for designation, for reasons similar to the I-95 case, include I-84, I-90 and I-87. NECFC would also support applications by states and MPOs for corridors I-78 and I-80 that are priorities for only one or two states in the Northeast, but have important beyond-region potential.

"Northeast Triangle"

This network consists of several related linear sections: I-87 and related routes from Greater NYC north to Albany; I-90 (including Berkshire Extension) from Albany east to Worcester & Greater Boston; I-95 & related routes north to coastal NH (Portsmouth) and south to coastal MA, RI, CT and Greater NYC; and I-84 from Worcester MA to I-87 (Hudson Valley).

Freight is transported primarily truck, but rail intermodal with CSX exists in Worcester and Albany areas, and "M-95" and "M-87" marine connections are possible alternatives. All portions have high existing and forecasted freight flows, with congestion worst in NY and Boston metro areas and on bridges over waterways.

Expanded truck parking is needed in several locations, and these facilities should be equipped with alternative fueling options and electric (no-idle) connections for standby-ready onboard cab comfort, auxiliary and reefer equipment. The I-95 Corridor Coalition's real-time truck parking locator project could evolve to highlight alternative fuel/layover features. En-route alternative fueling facilities are present, but additional stations are needed to provide adequate supply, and correct spacing between facilities.