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"The Future of Passenger Rail: What's Next for the Northeast Corridor?"

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Chairman Rockefeller, Ranking Member Thune, and distinguished Members of the Committee:

Thank you for the opportunity to submit testimony to the Senate Committee on Commerce, Science, and Transportation hearing entitled, "The Future of Passenger Rail: What's Next for the Northeast Corridor?" I am R. Richard Geddes, Associate Professor in the Department of Policy Analysis and Management at Cornell University, Director of the Cornell Program in Infrastructure Policy, and Visiting Scholar at the American Enterprise Institute.

In my view, one of the most important policy innovations that could be undertaken to revitalize passenger service on the Northeast Corridor (NEC) is to increase the role of private participants in a variety of activities. I thus focus on opportunities to better utilize private investment to enhance and expand passenger rail service in the NEC. Greater private participation in the design, construction, operation, maintenance, and financing of passenger rail service has the potential to improve significantly the overall experience of passengers traveling on the NEC as well as the value realized by American citizens from this critical national asset. Increased private participation is not a policy panacea. However, if properly implemented, such participation through greater use of public-private partnerships (PPPs) will address a set of problems that continue to hamper the development of high-quality passenger rail in the United States, particularly on this high-density corridor. Social benefits of PPPs stem from four main qualities associated with enhanced private participation:

(i) High-powered, focused incentives to innovate, to seek new revenue, and to better manage costs in a sector where high-powered incentives are socially beneficial
(ii) Business acumen, knowledge, and experience sourced from a global market for infrastructure operators
(iii) Additional capital and highly developed risk-bearing services through access to new debt and equity capital markets
(iv) The utilization of a competitive contracting approach that enforces high-quality service and asset maintenance, and allows the discipline of competition to be harnessed for the public good

Such benefits of PPPs are currently being realized through enhanced private participation in many aspects of the U.S. transportation sector. For example, the entire U.S. freight rail system can be viewed as a large, multi-faceted PPP. The public sector there provided the right of way and created the legal/institutional setting for contracting. Freight rail companies maintain and operate tracks, signaling, and rolling stock, while private investors provide capital, bear risk, focused incentives, and budgetary discipline. It is thus no accident that the grade assigned to freight rail infrastructure by the American Society of Civil Engineers in its *2013 Report Card for America's Infrastructure* improved from a C- in 2009 to a B in 2013, the largest improvement of any sector. The improvement was mainly due to billions of added private investment.

Private expertise and resources have long been instrumental in designing and building highways, bridges, and tunnels in the United States. Private partners are increasingly called

upon to provide capital, bear risk, and offer expertise associated with the operation of major transportation facilities such as toll roads and HOT lanes. Private firms are also now successfully operating large urban U.S. bus systems, such as in Nassau County, Long Island. They are making even larger contributions in many developed and developing countries' transportation systems. Private participation is also significant in other U.S. industries that require heavy investment in physical infrastructure, and which share a network structure, including aviation water, sewerage, and energy. For example, over half of all electric generating capacity in the United States is now provided by investor-owned utilities.

PPPs are the key contractual vehicle for incorporating private investment into the provision and operation of transportation infrastructure such as the NEC. The term "PPP" refers to a contractual relationship between a public-sector project sponsor and a private sector firm or firms coordinating to provide a critical public good or service. A PPP is subject to the standard rules of contracting, with clear performance standards linked to readily observable metrics. It is useful to think of a PPP as one application of a broader contracting approach.

There are many ways in which greater private participation on the NEC through PPPs will improve social welfare. Private participation can enhance welfare by creating new types of service, by generating more revenue from existing assets, by improving the quality of existing services, and by lowering the cost of providing a given service. It is useful to distinguish between two broad areas through which private firms can participate on the NEC. Private investors can be asked to make long-lived, sunk investments in transportation infrastructure, such as in tracks, stations, yards, right-of-way, signaling, etc. on which they will require assurance of a rate of return over time sufficient to compensate them for risk assumed. After investing, private partners often also maintain and operate the infrastructure. Institutional arrangements in this case must be designed to make such long-term irreversible investment rational in order to attract risk capital.

In the second area, private partners contribute by bringing capital, risk-bearing services, focused incentives, and expertise to the management of existing transportation assets. Although substantial investment in technology, upgrades, and renovation may be required, policy in this case is less focused on ensuring the security of long-term investment returns than on capturing the social benefits of greater innovation and expertise in managing existing assets. I focus on the role of private participants in this second capacity because many of the long-lived assets required to operate the NEC are already in place. It is important to stress that, in all cases, actual ownership of transportation assets remains with the public sector, and under enhanced public control through transparent contracts that include clear, enforceable performance standards.

Importantly, increased private, for-profit participation may not be appropriate for the provision of all goods and services. A consensus has emerged in economics that private participation may not be efficient where contracting with a private partner is complex and costly due to the inability to oversee – or "monitor" – the quality of service provided. To offer a possible example, one may be concerned about contracting out the operation of a wildlife sanctuary to

a private firm for fear that the operator would not maintain the environment in the sanctuary to a certain socially desirable standard, which is difficult to monitor. Stated differently, the quality of the wildlife's environment could be costly to contract over because quality of performance is difficult for the public contract sponsor to observe.

Because they involve "hard" assets, the types of activities being considered for increased private participation on the NEC are, however, precisely those activities where the private partner's performance is readily observable. The variety of metrics indicating how well stations, yards, signaling, and trains themselves are operated are readily observable. They can be provided for in a contract with measureable performance standards and clear enforcement provisions. Private participation on the NEC is thus likely to improve social welfare substantially through better performance. Perhaps more importantly, the enormous value locked within this critical national asset can be realized for all citizens though upfront concession payments, as I describe below.

Opportunities for Value Capture on the NEC

The entity we refer to as the "Northeast Corridor" is in fact a large set of transportation assets, each of which is valuable, and many of which are vastly underutilized under existing policies. The incentives, expertise and resources associated with private participation allow for the substantial value latent in those assets to be both increased and captured.

Competitive concession bidding (which can only be achieved by including private participants) is the key mechanism through which latent asset value can be realized. For example, the substantial value inherent in improving the management, maintenance and operation of a single station on the NEC can be extracted by requiring potential private partners (which may include a consortium of firms) to bid on the basis of the largest upfront concession payment they will offer to perform those services. Private partners bring high-powered incentives to enhance the station's value as much as possible. This is because private participation includes well-defined *residual claimants* who stand to capture value created by operating the station more efficiently (a *residual claim* refers to the explicit property right to capture the profits from an economic activity). This is in contrast to current government operation, where no well-defined group can capture the value created, so operation remains inefficient. Because they have such a large effect on incentives, the concepts of residual claims and residual claimants are critical to understanding how private participation generates enhanced value from NEC assets. Indeed, one can think of the concept of "value capture" as virtually synonymous with well-defined property rights, which include the right to capture value created by the property in question.

To continue with the station operation example, a private residual claimant generates additional value from operations in numerous ways. A private operator has the incentives, skills and resources to generate the greatest value possible from the station. This can be done through both revenue enhancement and through cost reduction, although economic studies of privatization in the former East Bloc countries indicate that the largest gains come from

innovations to raise more revenue. The partner may be able to increase revenue opportunities through more intensive use of concessions for food and beverage service, through more intensive use of shop concessions, through waiting-room naming opportunities, real estate development opportunities near stations, and many other possibilities. Through restoration and innovation, revenue opportunities can take advantage of the historic nature of the NEC's critical infrastructure facilities, some of which predate the First World War. By creating well-defined residual claimants and requiring them to bid against one another for station operating rights, upfront concession payments allow society to immediately realize the new value created.

A highway transportation PPP within the NEC provides another example. In January 2012, the Maryland Transportation Authority announced approval of a 35-year PPP concession for the redevelopment and operation of two travel plazas (Maryland House and Chesapeake House) on I-95 in Northeast Maryland. As an illustration of the private sector's access to capital, the concessionaire, Areas USA, will invest $56 million to redesign and rebuild the aging travel plazas, while the State will receive an estimated $400 million in added revenue over the life of the concession.

The travel plaza PPP came on the heels of Maryland's PPP agreement with a private partner to renovate and operate the Seagirt Marine Terminal in Baltimore. Under that agreement, the Maryland Port Administration leased its 200-acre marine terminal to Ports America. In return, Ports America will build a container berth with a 50 foot depth. This will allow the Port to accommodate ships with a larger draft, which will attract more shipping.

A third example is provided by the PPP completed in June 2011 between Violia Transportation and Nassau Country, New York to manage and operate all aspects of its transit service, which includes almost 300 buses and 180 para-transit vehicles. With a population of 1.3 million people, the Nassau County system is now the nation's largest privately operated municipal bus service. Although the PPP is relatively new, the early assessment is positive, and holds important lessons for the NEC. Buses are cleaner and more reliable due to a renewed emphasis on service quality and on customer needs. That enhanced reliability has generated greater ridership. Violia adopted a new, customer friendly website, and developed innovative visual tools that make Nassau's buses more appealing to passengers. Improvements have occurred without negatively impacting passengers. Fares were not increased and routes were not eliminated. Because of its operational focus, the Nassau bus contract has been termed a public-private operating partnership, or PPOP.

To apply this approach to NEC infrastructure, a PPP could be utilized to help construct the proposed Gateway tunnel for passenger rail traffic under the Hudson River. Such a PPP would rely on private *financing*, but would be *funded* through charges to the freight, commuter, and Amtrak trains that utilize the tunnel. The tunnel could be operated under a "real toll" PPP in which the private partner received the toll revenue directly, or under an "availability payments" type PPP in which the public sector receives the toll revenue, but then compensates the private partner based on pre-determined, transparent performance metrics. The project is estimated to cost $14.5 billion, but funding has not yet been identified. Such a project provides an ideal opportunity

to leverage the power of capital markets to generate the most capital possible from a given revenue stream.

In each example, the use of a PPP identified and tasked skilled, motivated, well-defined residual claimants with an incentive to maximize facility value. Enforceable contracts that include transparent performance standards can be used. The PPPs also brought additional capital and risk-bearing skills to bear. The citizens of Maryland and New York will share in the value created by private partners. A similar approach can be applied to other aspects of the NEC, particularly in passenger rail.

Opportunities for contracting operations, improvements, expansion, and management of NEC facilities can occur at different levels in the delivery process. The public PPP sponsor must decide how broadly versus how deep into the process it wishes to contract. At the highest, most aggregated level, operations, maintenance, and expansion of the entire NEC, including all train operations, could be contracted to a single private entity, which may represent an affiliated group of firms. Although the resulting contract would likely be very complex – and would require care and expertise to oversee – citizens would share in the massive value created by receiving one large upfront concession payment for the entire line. Because of the massive value of the transportation alternative provided by the NEC, such a payment would likely be very large. This is consistent with the substantial values realized by concession payments in other recent U.S. transportation PPPs.

The public sponsor could instead undertake private participation deeper down into NEC's operations. For example, station management could be competitively bid through a single management contract, with the management of ticketing, for example, undertaken through a separate entity. Still deeper into operations, the management of on-board food and beverage services, as well as in-station food, beverage, and newsstands could be competitively awarded through a different PPP. Additional on-board revenue opportunities include advertising on rolling stock, and advertising along the route. Increased private participation presents numerous clear opportunities to capture additional value from existing assets. The key decision is how far into process details should the public PPP sponsor execute and monitor contracts on the NEC versus how much it should delegate those responsibilities.

Value Revelation through PPP Bidding

An important insight from the economics literature on PPPs is that it is difficult to know the value inherent in an infrastructure asset (such as the NEC) until it has been assigned a value through competitive bidding. That is, in addition to allowing citizens to capture the value of the infrastructure they own, a key purpose of competitive PPP bidding is to *reveal the true value* of the assets in question. Importantly, such bidding will reveal value based on the financing and implementation of the latest technological innovations, since private partners have strong incentives to adopt such technologies. However, the effects of new technology implementation that accompany private participation on both revenue opportunities and on cost reduction are virtually unknowable until they are implemented.

This is highlighted by the fact that state and local governments are sometimes surprised by the large size of the upfront concession fees they are offered for brownfield PPP leases of highway assets, indicating that those assets were more valuable than previously thought. Importantly, value under-estimation often leads to under-investment in asset maintenance, which has plagued many U.S. transportation assets.

When more PPPs are used, the role of the public sector changes – and becomes more specialized – as private partners' participation grows. The public partner's role shifts from being a *service provider* to being a *designer and monitor of contracts* with private partners. Like any business, the public sector must decide where its core competency lies. There is little reason to believe that train station operation, for example, is a core government competency. Indeed, the benefits of contracting out train operations to private operators are being realized in other countries.

An objective assessment of which aspects of the NEC lie within the government's core competency as a service provider should be undertaken, and those aspects that are not core public sector competencies should be contracted to private partners who are expert in those activities. Once non-core competencies are determined, the public sponsor may need to develop additional skills in contract design, monitoring, and enforcement.

An added social benefit of the PPP approach is simply that a transparent contract exists. The contract clarifies such issues as the actions that constitute adequate performance. The PPP approach thus encourages the public sponsor to reflect upon, and articulate, what specific actions by the private partner constitute excellent, moderate, or poor performance. This may include metrics about key issues, such as the reliability and frequency of train travel, but also more detailed considerations such as the cleanliness of cabins, restrooms, and dining cars. The PPP approach thus improves the public's control over NEC assets by introducing a transparent, enforceable contract into its operation.

NEC Value Improvements Generated by Cost Management and Risk Assumption

An additional way in which citizens are able to realize added value via PPP concessions on the NEC is through the private sector's sharper incentives, resources, and skill in managing costs. Indeed, such incentives are referred to as "high powered" in the economics literature. Such cost savings will be realized by citizens through a larger upfront concession payment. Moreover, a lower cost of service may also depend on access to capital markets, since the social benefit of new technology often manifests itself through lower costs for the same type and quality of service.

A final, often-stated social benefit of including private partners is risk assumption. Train operations on the NEC are inherently risky. They include operational risks, such as bridge or tunnel problems, but also financial risk associated with changes in ridership. Under the current approach in the United States, taxpayers assume virtually all of the substantial risks associated

with designing, constructing, operating, and maintaining passenger rail systems. Through a PPP, some of those risks can be allocated to the private partner, thus reducing taxpayers' risk exposure. Because private investors are experts in pricing and bearing risk, this is an important benefit.

Finally, a hallmark of the PPP approach is it's inherently flexibility. The range of ways in which private participation can be incorporated on the NEC appears to be limited only by the creativity of the contracting parties. For the reasons I outline above, private participation in the provision of passenger rail service in the United States through greater PPP use should be encouraged.