Memo #1: Model Best Value RFP for the Purchase of Rolling Stock by US Transit Agencies

In the wake of the Great Recession, the nation continues to face a number of challenges related to economic recovery and job creation. In Washington, this is coupled with a prominent debate over the role of government and what types of policies and interventions are most appropriate to develop a new growth model focused on strengthening manufacturing and advanced industries, providing crucial infrastructure, and improving education and skills training.

As part of this agenda, President Obama is looking beyond Washington in his belief that "the federal government can partner with the private sector and the American people to spur innovation, invest in the skills of American workers, enhance our national capacity for high productivity manufacturing and stand up for American manufacturers in the global marketplace." Most efforts related to these goals have focused on the creation of new programs, new investment, and new tax credits to spur additional US manufacturing activity and workforce development programs.

In this era of fiscal austerity and limited public budgets, many have asked the question as to how billions of dollars of existing public investment can be leveraged to produce better results for all Americans. A prime example is transportation, the largest federal domestic discretionary spending item. Specifically, how can public agencies leverage resources they have already budgeted to buy buses and rail cars for the nation's transit systems? How can these investments stimulate more domestic production, better jobs, and more workforce training? How can they provide opportunities for career advancement, especially for disadvantaged groups, such as recent veterans and the long-term unemployed?

The federal Buy America program, for example, requires domestic production for 60 percent of the component parts used in federally funded *rolling stock*, which includes buses, locomotives, and railroad cars. However, recent experience shows that most of the engineering, design, and production of high value component parts are still being sourced outside the United States.

This outcome, in part, has emerged because transit agencies throughout the US do not often collaborate in their procurements. As a result, many transit vehicle manufacturers have complained about inconsistent demand and vastly different requirements and processes among different agencies. At the same time, very few transit agencies have prioritized the creation of more and better US jobs as a factor in the competition for publicly funded contracts in the production of rolling stock.

Fortunately, a few key cities and metropolitan areas are leading the way in this effort by experimenting with ways to better leverage their procurements to maximize economic impact. Metro Los Angeles, San Francisco and New York have developed pilot projects and innovative requests for proposals (RFPs) that have attempted to spur rolling stock production and stimulate job creation. In addition, a cadre of organizations, such as the Blue-Green Alliance, is leading efforts to work with these places.

In order to drive broad impact from these experiences, The National Transportation Manufacturing Project has been created to—among other things—create model procurements for use by U.S. transit agencies. These procurements, in turn, can help win better results from existing transportation investments and help regularize and systematize the demand for buses and rail cars in the United States.

The project is a deep collaboration between the Brookings Institution, the LA Alliance for a New Economy (LAANE), the University of Massachusetts-Amherst, and the University of Southern California, with funding from the Surdna Foundation, Living Cities, and the Ford Foundation. Several other experts and researchers from the University of Illinois-Chicago, Duke University and the University of Missouri-St. Louis also participated actively in this project. Numerous other organizations have committed to participate in the creation of a multi-year national initiative. These organizations include: the AFL-CIO, the Blue-Green Alliance, the Center for

Neighborhood Technology, Good Jobs First, the Partnership for Working Families, the Transportation Equity Network/Gamaliel, and the Environmental Law and Policy Center.

Early drafts of the *Model Best Value RFP for the Purchase of Rolling Stock by US Transit Agencies* were reviewed by dozens of private firms and transit agencies across the country. Reviewers include six major transit agencies, two bus manufacturers, four railcar manufacturers, the American Public Transportation Association, the US Department of Commerce Manufacturing Extension Partnership, as well as community-based institutions involved in workforce development for disadvantaged populations.

This is the first of several products produced by this project. The ultimate set of deliverables will include:

- Model RFP – general format with jobs and pricing components for "large buys" and "small buys" (completed and attached);
- Model contract and enforcement language for transit agencies using the Model RFP (2013);
- Additional component for Model RFP relating to the promotion of cleaner energy vehicles (2013);
- Best practices manual for transit agencies as well as numerous educational and training materials to support the program (2013).

The goal of the project is for transit agencies and other government institutions purchasing transit equipment to use these models and best practices consistently and regularly, which can dramatically increase both the number and quality of jobs created from transit investment.

Memo #2: Facility Credit

Over the past three decades, US transportation manufacturing experienced a distinct split between production and employment growth. Between 1980 and 2010, manufacturers' inflation-adjusted output jumped over 50 percent.[1] However, over the same period employment in transportation equipment manufacturing dropped by nearly 38 percent, subtracting over 800,000 jobs from the US economy.[2] Even with recent signs of a broader manufacturing return, these performance statistics cannot be undone with a year or two of positive gains.

Losing these kinds of manufacturing jobs come at a real cost to the US worker. The typical manufacturing employee in transportation equipment earned an annual income of over $67,000 in 2010—far exceeding the average American income of $49,000.[3] Just as importantly, the listed manufacturing earnings do not include many of the benefits typical for such jobs, from health care coverage to retirement contributions. When the country loses over 800,000 of these high-quality opportunities, American workers are left with fewer good jobs.

To address these employment losses, the model RFP aims to leverage investments in public transportation rolling stock (buses and trains) to generate more American jobs in transportation equipment manufacturing. One way to meet this goal is to expand the number of manufacturing facilities in the US, specifically by addressing gaps in the rolling stock supply chain.

According to detailed Duke University research, the current rolling stock supply chain includes two distinct problem areas.[4] The first is a gap in high-value manufacturing activities. This includes everything from human-driven tasks like engineering and design to complex production steps like propulsion systems and electronic systems, all of which tend to be performed outside the US. The second problem area is the lack of domestic demand relative to other countries. Because transit agencies in countries like Japan and France demand more vehicles, large manufacturers prefer to locate activities closer to those markets.

A major reason these gaps exist is because the most powerful US policy in this area, the Buy America provision under federal regulations, does not include the tools to address these problem areas. First, Buy America only requires that 60 percent of rolling stock components be manufactured in the United States. By definition, this does not include the high-value, human-driven processes like engineering and design. It also enables the manufacturers to revalue components based on what their US facilities can produce, essentially stacking the deck against US manufacturing. Second, firms may apply for exemptions from even the 60 percent provision.[5] One exemption qualifier includes evidence that a particular product is not readily available in the United States. Unintentionally, this qualifier and others function as a work-around for Buy America's spirit and perpetuate gaps in the supply chain.

To address these problem areas, the model RFP offers manufacturers the opportunity to gain credit for their investments in the supply chain's missing links. Calculating the credit is a relatively straightforward process. First, the bidding manufacturer reports the value of all facility investments that do not involve final assembly. Second, to ensure transit agencies do not bear the full costs for those investments, the facility investment's value is reduced to 20 percent of the total value, which is equal to a five-year, straight-line depreciation schedule. This leaves the resulting formula:

*Facility Credit = (Value of Non-Assembly Facility Investment) * 0.20*

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[1] Source: Brookings analysis of Moody's Economy.com data
[2] *ibid*
[3] *ibid*
[4] For more information see: Marcy Lowe and Others, "U.S. Manufacture of Rail Vehicles for Intercity Passenger Rail and Urban Transit (Durham: Duke University Center on Globalization, Governance & Competitiveness, 2010).
[5] Apollo Alliance, "Make It in America: The Apollo Clean Transportation Manufacturing Action Plan" (San Francisco: 2010).

In addition to lowering the facility's credited value, the depreciation multiplier includes a distinct benefit for the manufacturers. Each manufacturer will be permitted to claim credit for a particular facility investment over five years, meaning a manufacturer can receive credit for prior facility construction in future RFP applications. This 5-year applicability provides further incentive to invest in the US marketplace, and ensures the credit process does not overly promote the construction of new facilities at the expense of older ones. The goal is to fill gaps in the supply chain—not create a glut of facilities.

Incentivizing the construction of these non-assembly facilities will specifically target the problem areas in the US rolling stock supply chain. In addition, it will create positive spillovers for both the broader domestic economy and the country's transit agencies.

For the broader economy, these non-assembly facilities will generate more direct and indirect jobs. As previously mentioned, these manufacturing jobs pay above-average. But beyond just their direct pay, manufacturing jobs have a large multiplier effect—meaning they have the power to generate more net economic output and even help create other jobs in the economy. According to one detailed academic study, a manufacturing job in an area like transportation equipment could generate an additional $1.40 in output for every $1 in spending, and add an additional 2.5 jobs for each manufacturing job, with even higher job creation figures for high-skill manufacturing jobs.[6]

For the country's transit agencies, addressing supply chain gaps could lower their costs in the long-run. With valuable manufacturing activities taking place beyond U.S. borders, raw materials and parts must be transported between the U.S. and their partner countries. This can raise costs, meaning smaller vehicle orders. By moving more activities to the U.S., agencies may be able to purchase more vehicles for their dollar, an especially valuable opportunity in a time of public fiscal constraint. Just as importantly, lower costs may have the power to raise demand in the long-run, making it even more attractive for firms to locate manufacturing activities in the U.S. There is enormous potential for this positive feedback loop between agency demand and domestic manufacturing capacity.

[6] Joan Fitzgerald and Others, "Reviving the U.S. Rail and Transit Industry: Investments and Job Creation" (Boston: Northeastern University, 2010).

Memo #3: Disadvantaged Worker Credit

We have recently come out of one of the worst economic downturns in U.S. history. What began with the financial crisis became a housing crash, which helped trigger mass layoffs and unprecedented long-term unemployment. Employment rates fell more rapidly during the Great Recession (between 2007 and 2009) than in any prior recession.[1] Jobs in goods-producing industries, including manufacturing, have experienced the steepest declines in employment since the post-World War II era.[2] This past November the U.S. reported the loss of an additional 7,000 manufacturing jobs.[3] This is particularly alarming given the fact that historically, manufacturing in this country has been one of the few industries that has offered disadvantaged workers access to jobs with career ladders and the ability to earn a family-supporting wage.[4]

We should not lose sight of the fact, however, that this recent drop off is part of a longer-term trend. Over the last several decades communities across the U.S. have seen their good middle-class manufacturing jobs leave, only to be replaced by jobs that pay poverty wages. And although we are on the road towards a recovery (jobless rates have fallen to its lowest level in the past four years), much work remains to rebuild America's stock of decent employment opportunities. Our most disadvantaged and poorest communities, in particular, continue to struggle without the tools to address their dire jobs situation. As transit agencies move forward with billions of dollars of infrastructure upgrades and expansion, we are presented with the opportunity to do much more with our public procurements. The National Model Procurement program proposes to maximize the number of manufacturing jobs created in connection with the purchase of the buses and railcars needed to maintain and build out our transit systems.

The Model leverages deeper U.S. investments by bus and rail rolling stock car builders through a "Price Adjustment," which allows companies to earn credit for dollars spent towards training, workforce development, creation of high road transit manufacturing jobs and production facilities. The Model aims to create opportunities for access to good manufacturing jobs for unskilled workers and disadvantaged communities across the country through the "Disadvantaged Worker Credit."

The Disadvantaged Worker Credit incentivizes the hiring of disadvantaged individuals by enabling companies to get a credit for setting aside a certain proportion of their workforce for the hiring of disabled workers, recipients of Supplemental Nutrition Assistance Program (SNAP, formerly called Food Stamps) benefits or Temporary Assistance for Needy Families (TANF) benefits, individuals coming out of the criminal justice system with felony convictions, disabled veterans and those living in areas of concentrated poverty. The intent of the Model is to equip transit agencies with a set of practical tools to be more creative with its vehicle purchases and to stretch tax dollars further. The Disadvantaged Worker credit specifically leverages the power of public procurement to create entry points into the middle-class for impoverished workers facing significant barriers to employment.

[1] US Bureau of Labor Statistics, "The Recession of 2007 – 2009," BLS Spotlight on Statistics, 2012.
[2] *Ibid*
[3] Nelson D. Schwartz, "Jobless Rate Edges Down to Its Lowest Level in 4 Years," *New York Times*, December 7, 2012.
[4] Jared Bernstein, Edith Rasell, and John Schmitt, "Tax Cut No Cure For Middle Class Economic Woes," Economic Policy Institute (Washington: 1999.)

DEFINITIONS

Disadvantaged Worker is defined as an individual who, prior to commencing work on the Project, either (i) faces at least one of the following barriers to employment:

1. being a Disabled Worker;
2. being a current recipient of Supplemental Nutrition Assistance Program (SNAP) benefits or Temporary Assistance for Needy Families (TANF) benefits because of extreme poverty;
3. having a past record with the U.S. criminal justice system that includes a felony conviction;
4. being a Disabled Veteran; or

(ii) has a household income of less than 50 percent of the Area Median Income (AMI) as defined by the U.S. Department of Housing and Urban Development, and who resides in an Area of Concentrated Poverty.[5]

Area of Concentrated Poverty means a U.S. Census tract that qualifies as a HUD designated Qualified Census Tract (QCT) in which 50 percent of all households have incomes less than 60 percent of the area median income (AMI) – OR – the poverty rate in the tract is 25 percent or more. To determine an employee's eligibility, enter the employee's home address or census tract within HUD's QCT mapping application: http://www.huduser.org/QCT2013/qctmap.html.

Disabled Veteran means a veteran who served in the US Armed Forces and was either, retired from active military service with a service-connected Disability rating of 30 percent or more; or was rated by the United States Department of Veterans Affairs as having a compensable service-connected Disability of 30 percent or more.

Disabled Worker refers to a person who has a type of Disability that is targeted for emphasis in affirmative action planning for federal employment by the Office of Personnel Management (http://www.opm.gov/diversityandinclusion/reports/disability/DisabilityReportFY11_07-24-12.pdf) and who has documentation of her/his Disability from a licensed medical professional (e.g., a physician or other medical professional certified by a state, the District of Columbia, or a U.S. territory to practice medicine); a licensed vocational rehabilitation specialist (i.e., state or private); or any Federal agency, state agency, or agency of the District of Columbia or a U.S. territory that issues or provides disability benefits. Targeted disabilities include deafness, blindness, missing extremities, partial paralysis, complete paralysis, convulsive disorders, intellectual disabilities, mental illness, genetic or physical condition affecting limbs and/or spine.

CATEGORIES OF DISADVANTAGED WORKERS

The National Model Procurement program's Disadvantaged Worker Credit seeks to target those individuals that are met with significant and multiple barriers to employment. Disabled workers, recipients of SNAP and TANF, individuals having a past record with the U.S. criminal justice system that includes a felony conviction, disabled veterans and those residing in an area of concentrated poverty tend to possess characteristics that inhibit participation and promotion in the labor force. The Model strives to create entry points for those coming from disadvantaged backgrounds to be able to access training, workforce development and transferable skills to be successful in transit manufacturing jobs.

The following is a justification for the inclusion of the below individuals as Disadvantaged Workers:

1. **Disabled workers.** The serious obstacles disabled workers face in accessing job opportunities, put them at high risk of poverty. One academic study estimated that in 1997, people with disabilities represented nearly

[5] For more information on Area Median Income, see: http://www.huduser.org/portal/datasets/il.html.

half (47 percent) of working-age adults (age 25-61) who experienced poverty, as defined all by the official poverty line, for a full year. Among those who experience long-term poverty of at least 3 years over a 4-year period, people with disabilities represent the large majority (65 percent).[6]

2. **Current recipient of TANF or SNAP.** Recipients of TANF or SNAP are, by definition, very low income. Eligibility requirements for SNAP benefits, for example, include participation in other state or federal programs that serve low-income households or have incomes no greater than 130 percent of the federal poverty guideline.[7] Consequently, in Fiscal Year 2010, 85 percent of households receiving SNAP benefits had incomes below the official poverty line. Barriers to employment clearly are a significant factor: only 30 percent or participating households report any earned income at all. Adult recipients of TANF also have extremely low employment rates. Among adult recipients (ages 18 and over), the employment to population rate was 22.3 percent in 2010.[8] This compares to 60 percent among adults (ages 18 and over) in the general population.[9]

3. **Individuals having a past record with the U.S. criminal justice system that includes a felony conviction.** Individuals having a past record with the criminal justice system that includes a felony conviction face considerable barriers to employment, including lower educational attainment, limited work experience, substance abuse and other physical/mental health issues.[10] Related to these issues, they also face significant labor market discrimination.[11] Studies have found that the stigma of a felony conviction creates serious negative impacts on employment outcomes[12] including a strong reluctance by employers to hiring.[13] The literature indicates that those with prior criminal convictions are 50 to 66 percent less likely to be considered by employers as those without a criminal record[14] and that being previously incarcerated reduces earnings between 10 and 30 percent.[15]

4. **Disabled Veterans.** Veterans with 30 percent or more disability rating participate in the labor force—i.e., are either employed or seeking employment—at much lower rates than their nondisabled counterparts. According the Department of Labor, as of August 2011, the labor force participation rate among veterans with a 30 percent or more disability rating was significantly lower than among nondisabled veterans (40 percent versus 52 percent). Unemployment rates too are substantially worse for veterans with a 30 percent or more disability rating, 9.3 percent compared to 7.7 percent among nondisabled veterans.[16]

5. **Resident of an Area of Concentrated Poverty**. Areas of concentrated poverty often lack the employment opportunities, stores, banking services and institutional resources which characterize most middle- and mixed-

[6] Peiyun She and Gina A. Livermore, "Long-Term Poverty and Disability Among Working-Age Adults," *Journal of Disability Policy Studies*, 19(244), pp. 244-256: 2009.
[7] Congressional Budget Office, "The Supplemental Nutrition Assistance Program," (Washington: 2012.)
[8] US Department of Health and Human Services, "Characteristics and Financial Circumstances of TANF recipients, Fiscal Year 2010," (Washington: 2012.)
[9] US Department of Labor, "Household Data Annual Averages, Table 3: Employment Status of the Civilian Noninstitutional Population by Age, Sex, and Race," Labor Force Statistics from the Current Population Survey, 2012.
[10] Harry Holzer, Steven Raphael, and Michael A. Stoll. "Employment Barriers Facing Ex-Offenders," University of California-Los Angeles, Center for the Study of Urban Poverty Working Paper Series, 2003.
[11] Devah Pager, "The Mark of a Criminal Record," *American Journal of Sociology* 108.5: 937-975 (2003.)
[12] Christopher Uggen, Jeff Manza, and Angela Behrens, "Less than the Average Citizen: Stigma, Role Transition, and the Civic Reintegration of Convicted Felons," In *After Crime and Punishment: Pathways to Offender Reintegration*, S Maruna and R Immarigeon, eds, 261-293 (2004); and Devah Pager, Bruce Western, and Naomi Sugie. "Sequencing Disadvantage: Barriers to Employment Facing Young Black and White Men with Criminal Records," *The ANNALS of the American Academy of Political and Social Science* 623.1: 195-213 (2009.)
[13] Devah Pager and Bruce Western, "Investigating Prisoner Reentry: The Impact of Conviction Status on the Employment Prospects of Young Men," US Department of Justice Report 2005-IJ-CX-0019 (2009.)
[14] Pager, 2003.
[15] Holzer, Raphael, and Stoll, 2003.
[16] US Department of Labor, " Employment Situation of Veterans, Table 6: Employment Status of Veterans 18 Years and Over by Presence of Service-Connected Disability, Reported Disability Rating, Period of Service, and Sex," 2012.

income neighborhoods. Further, many high-poverty neighborhoods are located in central city areas disconnected from increasingly suburban labor markets. By crediting employers hiring workers residing in concentrated poverty areas, the Best Value Model RFP aims to connect residents of concentrated poverty areas to well-paid employment opportunities in manufacturing-related positions—that are otherwise not easily accessible to these residents.[17]

METHODOLOGY FOR CALCULATING THE DISADVANTAGED WORKER CREDIT

Contractor employment spending on the hiring of New Disadvantaged Workers, if any, can also be adjusted upwards to include a credit for up to 10 percent of the workforce that are New Disadvantaged Workers. The adjustment for New Disadvantaged Workers is equal to 20 percent the value of Project employment apportioned to New Disadvantaged Workers. This bonus credit reflects the additional costs the Proposer may incur recruiting and training New Disadvantaged Workers over and above the training and recruiting costs for the average manufacturing worker.

The text that follows provides in the following order, an estimate of the average training costs, average recruiting costs, and then cost estimates of the combined training and recruiting reported by programs specifically targeting disadvantaged workers. The size of the credit is calculated as the relative increase to average costs that manufacturing employers can be expected to face when adding disadvantaged workers to their workforce.

Training costs. The Department of Labor's Survey of Employer-Provided Training Program (SEPT) has published estimates of the training costs for manufacturing workers. Their estimates indicate that the annual cost of training for the average manufacturing worker is equal to approximately 5 percent of total compensation costs (including wages, salaries, and benefits).

Specifically, in 1994, the year of the survey, employers in the durable goods manufacturing industry spent an average of $10 billion on informal and formal training over six months, or about $20 billion over a full year. This figure combines the sum of selected direct expenditures on training[18] as well as the indirect costs to employers represented by the wages and salaries they pay to workers while workers receive training.[19] The selected direct employer training expenditures include the wages and salaries to in-house trainers, tuition reimbursements, payments to outside trainers and contributions to outside training funds. According to the Economic Census in 1997, the total payroll of the durable goods manufacturing was $373 billion. Therefore, average training costs for manufacturing employers amounted to 5 percent of total compensation ($20 billion/$373 billion=5.4 percent; 1.1 percent for direct costs and 4.3 percent for indirect costs).

[17] See: William J. Wilson, When Work Disappears: The World of the New Urban Poor (New York: Knopf, 1996), and HUD User, "Evidence Matters: Understanding Neighborhood Effects of Concentrated Poverty," Winter 2011. Studies suggest that the independent "neighborhood effects" of poverty rates associated with negative outcomes for individuals begin at just above 20 percent poverty and increase rapidly until a neighborhood reaches approximately 40 percent poverty (subsequent increases in the poverty rate appear to have no marginal effect). We use HUD's QCT definition as it captures a substantial share of neighborhoods within this range, is widely used, and is accompanied by an easy-to-use QCT mapping application. For more on neighborhood effects, see: George C. Galster, *The Mechanism(s) of Neighborhood Effects: Theory, Evidence, and Policy Implications*, Presentation at the ESRC Seminar, St. Andrews University, Scotland, UK, February 4-5, 2010. For more on the impact of concentrated poverty and the growth and changing location of poverty areas during the 2000s, particularly those areas where the poverty rate exceeds 40 percent, see: Alan Berube, Elizabeth Kneebone, and Carey Nadeau, "The Re-Emergence of Concentrated Poverty: Metropolitan Trends in the 2000s," (Washington: The Brookings Institution, 2011.)

[18] Approximately $4 billion. See: US Department of Labor, " Survey of Employer-Provided Training-Employer Results, Table 9: Selected Expenditures by Industry in 1994," 1995.

[19] Approximately $16 billion. See: US Department of Labor, "Report on the Amount of Formal and Informal Training Received by Employees, Table 12: Total Wage and Salary Costs of Training by Industry and Size Class, May-October 1995," 1996.

Recruiting costs. Recruiting costs for the average manufacturing position is about 3 percent of compensation annually, based on cost-per-hire estimates by human resource firms and a 30 percent annual average turnover rate in the industry from 2002 to 2011.

Two 2011 estimates of recruiting costs for industries with high recruitment costs, such as manufacturing, range between $4,000 and $6,400 per hire. The annual cost to employers based on these figures can be estimated by using the average annual turnover rate of 30 percent for manufacturing workers as estimated by the Labor Department's Job Openings and Labor Turnover Program over 2002-2011.[20] Given this turnover rate, the recruitment expense would effectively represent an annual cost of about $1,920 annually per position [$6,400/(1/0.30) = $1,920]. According the to the Labor Department's National Compensation Survey, manufacturer's employer cost of total compensation averaged $33.00 per hour in 2011 or $68,600 for a full-time year-round worker ($33 per hour x 40 weekly hours x 52 weeks per year=$68,600).[21] Average recruiting costs therefore represents about 3 percent of the average annual compensation per FTE worker ($1,920/$68,600 = 3 percent).

In sum, recruiting and training costs for the average manufacturing worker is approximately 8 percent of total annual compensation. This is approximately equal to $5,500 per FTE worker per year given 2011 annual total compensation cost of $68,600.

Training and Recruiting Costs of Disadvantaged Workers. New Disadvantaged Workers can be expected to require costlier recruiting and more than average training, including in basic skills, other training to reach entry-level requirements, as well as, on-the-job training. It is reasonable to assume that these costs would be approximately three times costlier to employers when employing Disadvantaged Workers—equivalent to an *additional* 16 percent of total compensation.

This estimate is based on past empirical research on recruiting and training Programs specifically designed for disadvantaged workers. A rigorous 2010 study of three different Programs that effectively trained and placed disadvantaged workers in specific sectors such as manufacturing, healthcare, construction and information technology estimated direct training and placement costs at approximately $6,000 per participant.[22] The 2011 average wage for a production worker in transportation equipment manufacturing ($25.36 according to the Labor Department's Current Employment Statistics Program) however is about double the average wage of the jobs that these participants obtained through the Programs ($12.50 per hour). The much higher average pay rate in transportation equipment manufacturing may indicate that this sector requires greater, and therefore costlier, training and recruiting than these studies estimate. Therefore, $6,000 in direct training and recruitment costs for Disadvantaged Workers in transportation equipment manufacturing should be considered a very low-end estimate.

This $6,000 estimate, in turn, implies a total cost of training and recruiting, now including both direct and *indirect* costs of, at minimum, $12,000. This is because, as the figures in above indicate, the costs of direct training (1 percent of total compensation) and recruiting (3 percent of total compensation) combined are about equal to indirect training costs (4 percent of compensation). In other words, the past experience of training and placement Programs for disadvantaged workers suggests that the training and recruiting costs for such workers in manufacturing jobs in transportation equipment would be, at minimum, $12,000.

The $12,000 figure is between two and three times the average $5,500 cost for the average manufacturing worker. Overall then, a reasonable estimate of the additional training and recruiting costs for Disadvantaged Workers in the transit manufacturing sector amounts to about three times that of the average worker. This represents at least

[20] Beth Greenwood, "The Average Recruitment Cost," *Houston Chronicle*, 2012; Lauren Weber, "For Smaller Firms, Recruiting Costs Add Up," *Wall Street Journal*, November 28, 2011.
[21] US Department of Labor, "National Compensation Survey," http://www.bls.gov/ncs/ect/home.htm.
[22] Sheila Maguire and others, "Tuning in to Local Labor Markets: Findings from the Sectoral Employment Impact Study," (Philadelphia: Public/Private Ventures, 2010.)

an additional cost to employers equal to 16 percent of annual employment costs, or roughly 20 percent. It should be noted that there are also additional community-wide benefits not accounted for in any of these figures, including for example, a reduction in such subsidy expenditures as Supplemental Nutrition Assistance Program (SNAP).

In sum, Proposers' value of employment for the share of FTE hours apportioned to Disadvantaged Workers will be given a bonus credit equivalent to 20 percent.

Conclusion

To create pathways into good transit manufacturing jobs for poor and disadvantaged communities, the National Model Procurement program's Disadvantaged Worker Credit is structured to incentivize the training and hiring of Americans facing significant and multiple barriers to employment. The Model seeks to target workers that have been disproportionately affected by poverty and the diminishing supply of decent-paying jobs, bringing more and deeper manufacturing to the U.S. and creating training and job opportunities that many Americans would otherwise not likely be able to access. The upgrade and expansion of our national transit network presents itself as a unique opportunity to do more with our tax dollars, to use public procurement to also spur economic development.