Blueprint for American Prosperity
Unleashing the Potential of a Metropolitan Nation

Metro Potential in ARRA:

An Early Assessment of the American Recovery and Reinvestment Act

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EXECUTIVE SUMMARY

America's national economic crisis is also a metropolitan crisis, because metropolitan areas are the true engines of the national economy.

Home to 65 percent of the U.S. population, the largest 100 metropolitan areas alone account for three-quarters of the nation's gross domestic product (GDP), as notes the Metropolitan Policy Program at Brookings' *Blueprint for American Prosperity* initiative. Strictly speaking, there is no single U.S. economy, but rather a tightly linked network of metropolitan economies.

And that is why it matters intensely how well efforts to revive the nation's economy—including the American Recovery and Reinvestment Act (ARRA)—empower metropolitan leaders to marshal their given resources to boost prosperity.

To produce real prosperity local leaders require rich stocks of the fundamental "drivers" of productive growth—key innovation inputs, cutting-edge infrastructure, abundant human capital, and quality places. But metropolitan actors also need the discretion and power to aggregate, link, and coordinate those drivers to maximize their impact.

Therefore, it is a matter of both national and local concern to consider how ARRA, aka the "stimulus" package, will affect U.S. metropolitan areas, and to assess how easily—or not—its multiple funding flows may be utilized to bolster metro efforts to get the economy moving.

This report probes those questions by providing an initial overview of the intent, approach, and content of ARRA from the point of view of metropolitan America.

From that perspective, this policy paper finds that ARRA usefully directs billions of dollars towards significant investments in the four key drivers of prosperity that concentrate in metropolitan areas. At the same time, the paper concludes that ARRA does very little to actively support metropolitan leaders' efforts to bundle and align ARRA resources to foster local and national recovery. This lack of attention means that the burden of optimizing ARRA's implementation falls squarely on states, which control significant amounts of ARRA funding, and local and regional actors, who will have a number of opportunities to craft coordinated approaches to implementing the law and sparking recovery.

Along these lines, the report finds that:

1. **The need for fast action created a bias towards "business-as-usual" delivery systems in the crafting of ARRA, and that limits the extent to which the recovery act actively supports creative metropolitan-area implementation.** ARRA, which became law in February 2009, was assembled as the nation's unemployment rate exceeded 8 percent, and job losses exceeded 600,000 a month. Thus, the need to intervene quickly led the package's designers to channel ARRA's huge flow of funds largely through existing federal-state-local mechanisms, subject to existing laws and guidelines. Because current federal policy is generally neutral or hostile towards action at a metropolitan scale, ARRA is also. As a result, ARRA inhibits metropolitan creativity in implementation in three ways. First, it assigns a dominant role to states—which have an uneven record on metropolitan issues. Second, the package treats most of its investment streams as separate and distinct, and sends them to multiple actors at different levels of state-regional-local authority, which will complicate creative efforts at the metropolitan level to "put it all together" in service of integrated solutions. And third, ARRA's welcome emphasis on transparency tilts too much toward curbing waste, fraud, and abuse and too little on establishing a clear, sensible focus on measuring outcomes.

2. **And yet, despite its flaws, ARRA delivers to metropolitan areas critical investments in what matters.** In this respect, we estimate that nearly 43 percent—roughly $335 billion—of the total stimulus appropriation supports the main drivers of prosperity: innovation, human capital, infrastructure, and quality places. These investments include:

- ***For innovation:*** $50 billion for federal research, development, and deployment (RD&D) to spur new breakthroughs out of universities, lab, health complexes, and research centers. Of this $18–20 billion will support tax breaks and bonds to accelerate the market adoption of new clean energy technologies

- ***For human capital****:* $125 billion in funding and tax measures to improve schools, raise the level of educational attainment, close achievement gaps, and upgrade workforce skills. In many respect this spending will provide a backstop against inevitable state budget cuts

- ***For infrastructure:*** $126 billion in spending on transportation (including high-speed rail), energy grid, water-sewer, and other areas that influence metros' built environments. Some $53 billion of this—the largest single share of funds in ARRA—will flow to transportation infrastructure, largely through the standard Surface Transportation Program (STP) distribution formula

- ***For sustainable, quality place-making:*** $34 billion for efforts in energy efficiency, affordable housing, neighborhood stabilization, and local economic development. These important investments in housing, neighborhoods, environmental programs, and community development—if deployed wisely—will help stabilize and enhance metropolitan places

3. **In addition, ARRA holds out significant opportunities for creative metro leaders to engage in coordinated, regionalized problem solving.** The more metro leaders can link and align the various resources ARRA provides the greater will be the impact of the recovery package. In this connection, notwithstanding its limitations, the recovery act provides important chances to link resources and even for transformative governance.
   - **ARRA provides, on the first point, a number of avenues for coordinating its various funding streams at a metropolitan level, particularly in new competitive grant programs.** A few of the relevant provisions include:
     - ***The Advanced Research Projects Agency-Energy (ARPA-E):*** A $400 million appropriation for cutting-edge energy R&D will require collaboration among private firms, universities, labs, and research institutes that could seed the sort of cross-institutional partnerships that facilitate continued, regional innovation and economic growth
     - ***Worker training in high-growth and emerging industries:*** *A* $750 million appropriation for connecting workforce development to competitive industry sectors could spur regional approaches to supporting high-value clusters, especially around energy efficiency and renewable energy
     - ***Multimodal transportation****:* Some $1.5 billion will fund competitive grants to support nationally, regionally, or metro-significant projects that may facilitate linking transportation, housing, energy, and environmental concerns
     - ***Energy Efficiency and Conservation Block Grants:*** ARRA provides $3.2 billion in tremendously flexible grants that could motivate metro-scale strategies for reducing fossil fuel emissions and promoting energy efficiency in transportation, building, and other sectors
     - ***The Neighborhood Stabilization Program:*** Two billion dollars is available to address the secondary, community impacts of the foreclosure crisis and may lead to metro-wide partnerships between state and local governments, nonprofits, and private entities
   - **Some elements of ARRA, moreover, truly do represent the sort of transformative policymaking that can strengthen all levels of governance and kindle truly metropolitan action.** In many of these areas, region-based actors will enjoy significant latitude to work together through cooperative support systems, regional projects, regional plans to guide investments, project selection criteria, and project prioritization to weave disparate funding flows together into a more coherent intervention in the prosperity of their regions and nation. For example:
     - ***On energy retrofits***: An effort by the Departments of Energy and Housing and Urban Development to leverage some $16 billion in ARRA funds could spark a major private retrofit market in U.S. regions. This effort could benefit metros in two ways. First, it will contribute to the emergence of an industry that could provide jobs and spark the economy in some of the

oldest swaths of metropolitan areas (where most older, energy-inefficient housing stock is located). And second, the initiative will strike a blow for integrated policymaking by stepping beyond the sort of silo-driven policy that so often frustrates metropolitan innovation

- ***On education innovation:*** A $650 million Department of Education competitive grant program to local school districts, or partnerships between local districts and non-profit organizations, could stimulate the expansion of high-performance charter management organizations and increase the local supply of highly effective teachers to staff those and other high-needs schools

- ***On accountability:*** Transparency provisions, despite the limitations noted above, have the potential to reveal in new ways the myriad channels through which the federal government delivers funds, and the biases in how states allocate them. Such information could be the foundation of a call for new, metropolitan-oriented federal delivery systems

* * *

In short, ARRA provides many important new resources to state, local, and metro leaders' efforts to assemble the key drivers of regional prosperity, but it only somewhat advances attempts to recast how such inputs might best be bundled and aligned to serve the nation's and metropolitan areas' long-term recovery. At the same time, ARRA does make some genuine efforts to foster high-quality governance and integrated implementation. Hopefully, future federal policymaking (such as the FY2010 budget process, forthcoming energy legislation, and the transportation bill reauthorization) will build on ARRA's tentative efforts and really grapple with how to ensure that local and federal resources will be optimally linked and aligned in specific metropolitan places.

In the meantime, creative players at the local, metro, and state levels should move aggressively to do what they can to link and align siloed programs for the good of the nation.

I. INTRODUCTION

The American Recovery and Reinvestment Act (ARRA) became law in early 2009 as the nation's unemployment rate hit 8.1 percent, gross domestic product (GDP) was announced to have declined at an annual rate of more than 6 percent in the fourth quarter of 2008, and job losses exceeded 600,000 for a third consecutive month.[1]

The federal government had injected public dollars into nearly 500 banks, deployed $300 billion in various bank stabilization measures, and provided $17.4 billion in loans to the Big Three car makers, yet none of this had sufficiently thawed the credit markets or calmed the stock markets.[2] Almost every day, as the bill was assembled, Americans were being warned that the country was falling into the biggest recession since the Great Depression and that it was likely to get worse before it got better.

In that context, ARRA took shape and was passed as quite simply the biggest and boldest response to a national economic downturn in U.S. history.[3]

And yet, the national crisis was and is also a metropolitan crisis. Metropolitan areas are the true engines of the national economy, as observes the Metropolitan Policy Program at Brookings' *Blueprint for American Prosperity* initiative.[4] Home to 65 percent of the U.S. population, the largest 100 metropolitan areas alone account for 75 percent of the nation's GDP; 78 percent of its patent awards; 96 percent of all venture capital funding; 75 percent of graduate degree holders; and 92 percent of airline passenger boardings.[5]

In that sense, the strength of these hubs means there is no such thing as a national economy, but rather an interlinked network of 363 metropolitan economies, as suggested by Harvard Business School competitiveness scholar Michael Porter.[6] And that means that any national recovery will be driven substantially by the recovery of U.S. metro areas.

Thus, it is a matter of both national and metropolitan concern to consider how ARRA, a.k.a. the "stimulus" package, will affect U.S. metropolitan areas and to assess how easily—or not—its multiple funding flows may be marshaled to bolster state and metropolitan efforts to boost prosperity.

This report begins to assess that open question by providing an early overview of the intent, approach, and content of ARRA from the point of view of metropolitan America.

From the metro perspective, there are two overriding questions: First, did the federal government invest in what matters to metros? And second, did the federal government empower metropolitan areas to pull these investments together in a coordinated way to maximize prosperity?

From our initial review, the answer to the investments question is largely affirmative. Investments in innovation, human capital, infrastructure, and quality places make up a significant portion of the $787 billion and will provide an important boost to metropolitan problem solving.

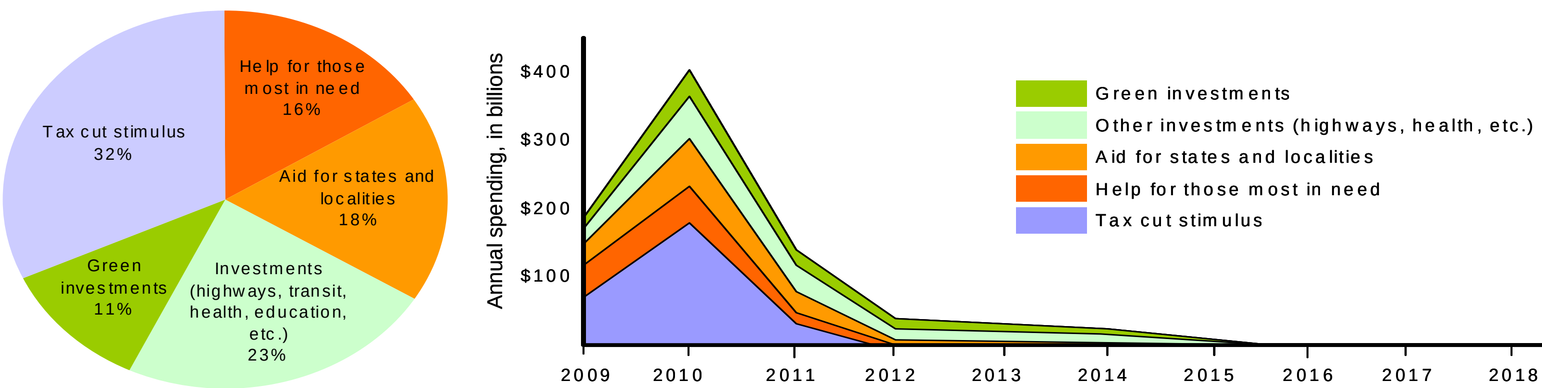
As to whether the stimulus package empowers metro coordination, the answer, unfortunately, appears mostly not—with a few exceptions. How well federal policymakers can optimize ARRA's implementation and learn from its shortcomings to improve policymaking will be an important influence on future metropolitan and national prosperity.

ARRA's priorities

Above all, ARRA is an effort to jump-start economic revival quickly. The bill's opening passage states its five purposes: (1) job preservation and creation to promote economic recovery; (2) infrastructure investment; (3) investment in science, health, and technological advancement; (4) assistance to those most impacted by the recession; (5) fiscal stabilization for state and local government budgets in order to minimize and avoid reductions in essential services and counterproductive state and local tax increases.[7]

In broad outline, ARRA is a massive (400 pages; $787 billion), sprawling (350 individual spending or tax provisions) accretion of multiple tax cuts, investments, and aid. With short-term stimulus the goal, the legislation calls for a substantial portion of its appropriations to be spent during the next two years.

ARRA balances tax cuts, investments, and aid, a substantial portion of which must be expended within the next two years



Source: Center for American Progress

In fact, the need for swift action was part of the stimulus debate from the very beginning. As President Obama stated in his first weekly address as president, on January 24, 2009, "[I]f we do not act boldly and swiftly, a bad situation could become dramatically worse."

Office of Management and Budget (OMB) Director Peter Orszag was equally forceful on the need not just to enact legislation rapidly, but to disburse the funds from the federal Treasury with haste. In a January 27 letter to House Appropriations Chairman David Obey, Orszag wrote: "[I]t is critical that we jump-start job creation with a direct fiscal boost that will lift the nation out of this deep recession."[8]

The exigencies of moving forward quickly meant that there was no time to reinvent government as well. So the laws and structures that the federal government already had in place became the vehicles for ARRA spending—not because they were ideal, but because they were ready at hand.

Or as Council of Economic Advisors Chair Christina Romer affirmed shortly after the act's passage, the package "looks pretty plain vanilla" in that it "emphasizes aggregate demand stimulus over more sophisticated possibilities."[9]

In that sense, because ARRA's huge flow of funds moves mainly through existing delivery systems and hews to guidelines in existing laws, the recovery act essentially represents a combination of the federal budget and appropriations process moving at warp speed. Thus, for the most part, while ARRA will be an important spur to local job creation, it remains either neutral or an impediment to metropolitan governance and collaboration, due to existing federal policy.

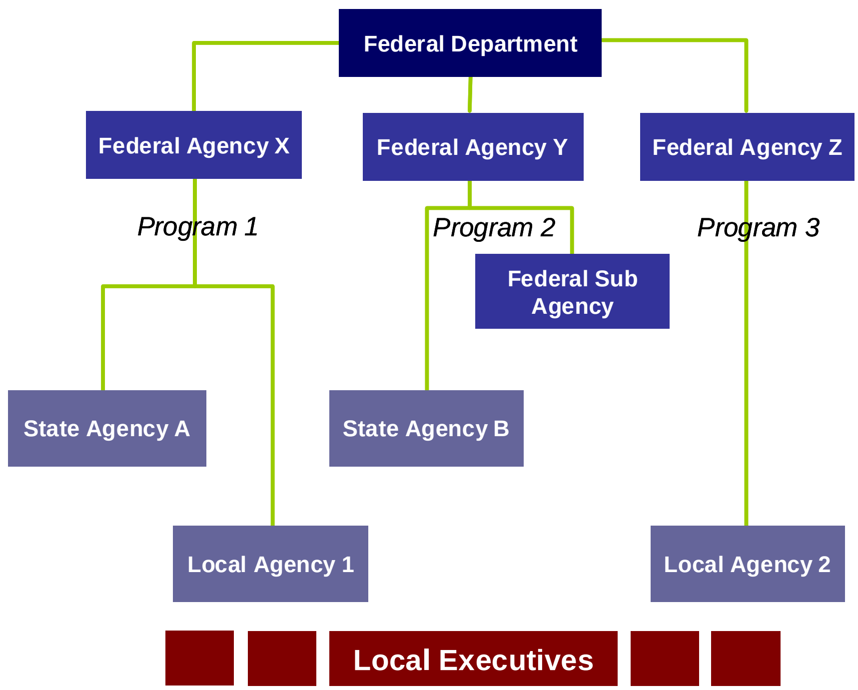
ARRA will, of course, have a tremendous effect on metropolitan areas. The roads built, jobs created, and energy conserved through the working out of the bill's provisions will happen at particular points on the map, in specific jurisdictions, which will be in turn linked to other jurisdictions by flows of people, traffic, and pollution.

But, for the most part ARRA creates metropolitan policy by accident.

The huge role ARRA assigns to states in making the recovery package work well, to begin with, means that massive responsibility for realizing pro-metropolitan solutions has been exported to the nation's state capitols—with their uneven record on metropolitan issues. This is worrisome. Use of the Surface Transportation Program (STP) formula to distribute funds, to choose just one example, creates a high likelihood that much of the funding will support transportation programming-as-usual, including a bias toward new capacity and construction around the metropolitan periphery, rather than more creative metro-centric problem-solving—although there is plenty of opportunity for that (see below).[10]

Similarly, most of ARRA's investment streams are treated as separate and distinct, with innovation flows, infrastructure flows, and housing and human capital flows disbursed without much effort to connect them or foster synergy in ways that make the whole greater than the sum of the parts. As a result, it will fall to creative players at the local and metropolitan level to "put it together" where possible in service of multi-dimensional and integrated solutions.

ARRA's provisions—like most federal spending flows—are complicated by horizontal siloing of activities and vertical disjunctions between key relevant actors



And then, ARRA's tremendous emphasis on transparency should be useful in showing how federal spending does or does not support the nation's metropolitan economic engines. But that emphasis is heavily weighted towards a notion of "accountability" focused on curbing waste, fraud, and abuse and too little on establishing a clear, sensible focus on outcomes. What is more, ambiguity about what information will be collected and how it will be integrated and made public indicates that the needs of metropolitan area stakeholders may not be fully met.

The circumstance of ARRA's assembly—an urgent national economic crisis—make it entirely understandable that the package lacks deep metropolitan-oriented reforms. In ARRA, as in most of its other activities, the federal government has directed significant attention and funds to bolstering the drivers of prosperity but has so far grappled little with how to ensure those resources can be best linked and aligned in specific metropolitan places.

ARRA's metropolitan possibilities

And yet, the bill's shortcomings as metropolitan policy—an agenda to which it did not aspire—should not obscure the fact that ARRA will send billions of dollars to states and metropolitan areas, in the form of investments in the key assets that drive regional vitality. All told, perhaps $335 billion, or about 43 percent of the appropriations, by the Metro Program's rough calculations, will flow to spending areas relevant to such metropolitan-area priorities as infrastructure, human capital, innovation, and sustainable placemaking, as well as programs that will support regional governance or increase transparency.

These funds include:

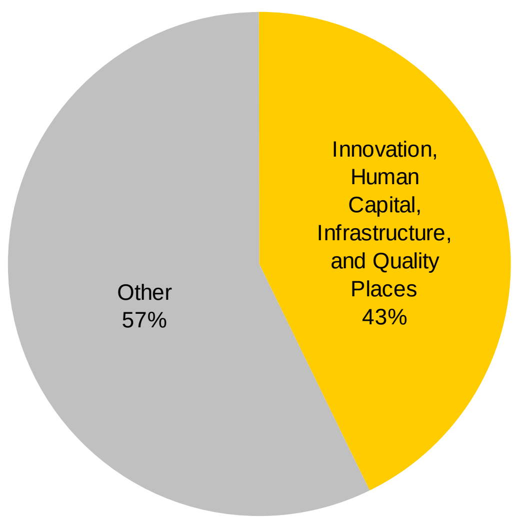
- $50 billion in federal research and development (R&D) funding and other measures critical to ***innovation*** activities in local universities, labs, health complexes, and research centers

- $125 billion in direct funding for education and ***human capital*** cultivation, including billions in funds for incentives to states and $650 million specifically to support innovative school districts

- $126 billion in spending on transportation, energy grid, water-sewer and other ***infrastructure***, including $8 billion for high-speed rail projects

- $34 billion to support energy retrofits of buildings, community and inner-city business development, and affordable housing—things that contribute to the creation of ***sustainable, high-quality places*** in metropolitan America

While ARRA was never intended as reform the act directs billions toward bolstering key metro-relevant assets



Source: Brookings analysis of ARRA

Still other provisions do in fact provide an impetus for metropolitan collaboration and policy coordination:

- $400 million for a new Advanced Research Projects Agency-Energy (ARPA-E) will require collaboration between private firms, universities, research institutes, and labs and should seed the sort of cross-institutional regional collaborations that could facilitate continued innovation and economic growth

- $750 million for connecting worker training to high-growth and emerging industries could spur regional approaches to training workers and so sustain the growth of regional industry clusters, especially around renewable energy and energy efficiency

- $1.5 billion in competitive grants for major transportation projects may provide an opportunity to create mixed-use facilities, and generally link transportation, housing, energy, and environmental programs

- $3.2 billion in Energy Efficiency and Conservation Block Grants (EECBGs) can be used for metropolitan strategies to conserve energy and reduce driving in other coordinated ways

- $2 billion in a second round of Neighborhood Stabilization Program funding, administered by HUD and awarded competitively to state and local governments, nonprofit entities, and consortiums of nonprofit entities, will greatly support metro-scaled partnerships between public, private, and non-profit entities

And finally, some elements of ARRA provide not only significant funds, but also move toward transformative implementation of the kind the Metro Program has called for:[11]

- An effort by the departments of Energy and Housing and Urban Development to leverage some $16 billion in ARRA funds for energy-efficiency retrofits could jumpstart a major private retrofit market. This effort could benefit metros in two ways. First, it will contribute to the emergence of an industry that could provide jobs and spark the economy in some of the nation's oldest swaths of metropolitan areas (where most older, energy-inefficient housing stock is located). And second, the initiative will strike a blow for integrated policymaking by stepping beyond the sort of silo-driven policy that so often frustrates metropolitan innovation

- A $650 million Department of Education competitive grant program to local school districts, or partnerships between local districts and non-profit organizations could stimulate the expansion of high-performance charter management organizations and increase the local supply of highly effective teachers to staff those and other high-needs schools

- Transparency provisions, despite the limitations noted above, have the potential to reveal in new ways the myriad channels through which the federal government delivers funds, and the biases in how states allocate them. Such information could be the foundation of a call for new metropolitan-oriented federal delivery systems

In many of these areas, in short, region-based actors will enjoy significant latitude to work together through cooperative support systems, regional projects, regional plans to guide investments, project selection criteria, and project prioritization to weave disparate funding flows into a more coherent intervention.

On balance, then, ARRA provides many important new resources to support state, local, and metropolitan leaders' work to assemble the key inputs to prosperity, but it does not significantly advance leaders' efforts to recast how such inputs might best be bundled and aligned to serve the nation's long-term recovery. At the same time, ARRA does make some significant efforts to foster high-quality governance and integrated implementation. Perhaps future legislation will build on these initial efforts and really grapple with how to ensure that local and federal resources will be optimally linked and aligned in specific metropolitan places for the good of the nation. And in the meantime, creative players at the local and metro level should move aggressively to do what they can to pull siloed programs together and harmonize them.

The rest of this report explores these contours. Overall, the brief moves to offer a more detailed initial assessment of ARRA from a metropolitan perspective, aimed at giving metropolitan leaders a quick sense of the legislation's provisions and how they dovetail with the priorities of progressive metro-oriented leaders and actors.

In sections 2 through 7, the report examines ARRA's impact on each of the drivers of prosperity: innovation, human capital, infrastructure, and sustainable quality places, as well as regional governance and high-quality information flows. In each section, the Metro Program's basic perspective on a policy domain will be reprised, and ARRA's relevant provisions reviewed in light of that. In each case, some initial assessments will be hazarded on possible opportunities for creative, coordinated metropolitan implementation. A final note concludes. The appendices provide in tabular form item-by-item information on key recovery act provisions grouped by key prosperity factors: innovation capacity, infrastructure, human capital, quality places, and regional governance.

II. INNOVATION

The innovation capacity of America's metropolitan regions stands as a critical first driver of the nation's prosperity. Very simply, the nation's recovery and longer-term economic performance hinges in large part on how well metropolitan areas—the bulk of the economy—function as incubators of new ideas and knowledge-driven job-creation.

Central to the *Blueprint for American Prosperity*, this assertion reflects the fact that the bulk of the nation's innovation-generating assets concentrate in metropolitan areas.[12] For example, just the largest 100 American metros encompass 70 percent of the nation's research universities, 77 percent of U.S. knowledge jobs, 78 percent of all patents, 82 percent of federal health and science research funding, and 96 percent of venture capital investment.[13]

Consequently, *Blueprint* papers call for federal policy to promote innovation as a national priority, support innovation-inducing regional industry clusters, and ramp up investments in scientific research—especially around clean energy—to advance technological innovation.[14]

So, to what extent does the stimulus and recovery package work to expand and leverage the innovation assets available in America's metropolitan economies?

As it happens, ARRA includes a number of significant spending directives and financial incentives that will greatly help to stimulate long-run innovation within the U.S. economy. By our estimates, for example, spending and tax measures directly related to supporting innovation account for some $50 million, or 6 percent of the total appropriations authorized by ARRA.

Of these flows, some $21 billion will go to the basic federal science, biomedical, energy, and climate R&D programs that serve as key inputs into the metropolitan innovation system. Another $8.3 billion will support grant and loan programs aimed at accelerating the development and deployment of new clean energy technologies. And still another $18 billion–$20 billion of stimulus provisions for taxes and bonds will seek to accelerate the production, deployment, and market adoption of new clean energy technologies over the next 10 years.[15] Finally, ARRA appropriates some $900 million for potentially region-oriented, innovation-inducing workforce and economic development grants.

Overall, then, significant new federal investments will flow into programs that contribute heavily to the fundamental innovation capacity of metropolitan America. Beyond that, a couple of ARRA items touch on the recognition that elements of innovation—workers, education, jobs—work best when tied together, especially at a regional scale.

R&D

After years of stagnating federal R&D investment, ARRA gives a major boost to the nation's research infrastructure. All told, the bill appropriates an estimated total of $21.5 billion for federal R&D funding, with $18 billion going toward the conduct of research and another $3.5 billion for research facilities and capital equipment.[16]

Of these flows, two of the largest single infusions of stimulus R&D money will flow through the **National Institutes of Health (NIH)**, which is slated to receive some $10.4 billion, and the **National Science Foundation (NSF)**, which will receive $3 billion.[17] In addition, another $8.8 billion or so in R&D-related appropriations will flow toward energy and climate research through the work of the **Department of Energy (DOE),** the **Department of Defense (DOD), National Aeronautics and Space Administration,** and the **National Oceanic and Atmospheric Administration (NOAA)**.[18]

While federal R&D flows are not place-oriented, they flow inordinately to institutions—universities, hospitals, labs, and others—that are disproportionately located in metropolitan areas and there conduct the basic and applied research that feeds regional innovation pipelines.

Along these lines, sizable infusions to three major research grant-funding agencies highlighted in the America COMPETES Act of 2007—NSF, the **National Institute of Standards and Technology (NIST)**, and DOE's Office of Science—bear special attention.[19] Through these important existing programs, billions of dollars of stimulus funding will flow for basic science and technology research grants, facilities modernization and construction, equipment upgrades, and teacher training in math and science. As the money flows, it will mean more research grants to cutting-edge local researchers, more up-to-the-minute lab space in metropolitan medical complexes, more university graduate students, and, on balance, new activity of the sort that stimulates the regional innovation system and spawns new products, processes, and, ultimately, jobs to sustain regional competitiveness.

And there is one more R&D appropriation of note from a metropolitan innovation perspective. This is the provision of $400 million for high-risk, high-reward energy research through a new **Advanced Research Projects Agency-Energy (ARPA-E)**, which had been authorized by America COMPETES but never funded. Envisioned as a lean, nimble entity organized outside of DOE's standard bureaucracy, ARPA-E would seem to comport well with the *Blueprint*'s vision of innovation promotion and organizational invention—even if the agency is limited to energy research. That ARPA-E will focus on the so-called "valley of death" investment gap that prevents the transition of new technology into the marketplace answers smartly to *Blueprint* calls to actively promote commercial innovation. That the new agency will facilitate broad collaboration between private firms, universities, research institutes, and labs in service of that goal makes it an important federal step toward the sort of new energy research paradigms called for in the *Blueprint.* Moreover, of all of the R&D-oriented items in the stimulus package, none may have greater implications for regional economic cohesion. ARPA-E funding priorities and funded projects may seed the sort of cross-institutional regional collaborations that could facilitate continued innovation and long-lasting economic growth.

Clean energy

On clean energy, the stimulus bill moves beyond research with a combination of financial incentives designed to ramp up private sector investment for innovation around new "green" technologies. Included here are $1.6 billion for bonds to **finance capital expenditures at certain renewable energy facilities**; $2 billion worth of **grants for companies manufacturing advanced battery systems;** another $300 million in grants for **piloting advanced technology vehicles and their systems**; and $6 billion worth of **loan guarantees** (projected to leverage $60 billion of private investment) **for the development and deployment of clean energy technologies**.[20] Additionally, ARRA includes a series of **clean energy tax provisions** that have an estimated total value of $18 billion over 10 years.[21]

In the clean energy field, ARRA financial incentives aim to spur the commercialization, adoption, and market penetration of new technology products or processes that will be critical to increasing metros' and the nation's long-term productivity and living standards as the nation addresses societal challenges like climate change. To do that, ARRA includes provisions that could flow to a variety of local and metropolitan actors, including individual companies, public and cooperative electric utilities, renewable energy facilities, state and local governments, and metropolitan transportation authorities.

These provisions, however, while of long-term strategic significance, are delivered by ARRA in the spirit of short-term stimulus and are provided in ways aimed a providing a near-term boost to private-sector innovation activities. Therefore, while there may be extensions and expansions of tax incentives later, many of the stimulus tax incentives are currently only temporary, designed with the current economic downturn in mind, and others favor renewable energy projects with short lead times or those that can be installed incrementally.[22] To further speed deployment, the DOE has announced new streamlined procedures to expedite the disbursal of stimulus funds and loan guarantees. DOE loan guarantees established by ARRA will become available by early summer 2009, and the department plans to disburse 70 percent of the ARRA funds by the end of 2010.[23]

And again, it bears noting that although most of ARRA's energy provisions flow to individual companies, at least one program for the deployment of new energy technology focuses on government players—including local and regional ones. In this case, ARRA's grants for piloting the expansion of plug-in electric and other advanced vehicles are available to states, localities, and metropolitan transportation authorities.[24] To that extent, this item has the potential for empowering metropolitan actors in the work of expanding the use of and building the infrastructure to support alternative fueled and advanced technology vehicles. Through it, state and local leaders have a chance to embrace technological advances in the transportation sector and nurture the innovation capacity of their communities.

In short, to the extent that favorable stimulus incentives motivate new clean energy business starts and expansions in particular regions, they may well encourage the growth and development of the nation's nascent "cleantech" industry clusters. If that were to occur, the short-term interventions of ARRA might very well contribute to longer-term economic transformation.

Regional development provisions

Elsewhere, a few regional development grants in ARRA may present opportunities to support innovation-based growth at the metropolitan scale. Such grants hold out the potential for the coordination between institutions and activities that many leaders believe will best facilitate the longer-run emergence of vital regional industry clusters.

For example, the stimulus package contains a $150 million appropriation aimed at economically-distressed regions—and offered to states, localities, higher education institutions, and eligible nonprofits—to **promote comprehensive, entrepreneurial and innovation-based economic development efforts**.[25] This funding could incentivize the leveraging and aligning of private and public resources toward more coordinated support of the sort of emerging, high-growth industry clusters that can help drive and sustain the recovery of metropolitan area economies.[26]

Additionally, ARRA provides a $750 million stimulus for **connecting worker training to specific high-growth and emerging industries,** especially energy efficiency, renewable energy, and health care, as well as broadband deployment and advanced manufacturing.[27] This, too, could be a crucial spur to regional approaches to feeding the human capital pipeline necessary for sustaining the growth of high-value industry clusters, especially those engaged in renewable energy and energy efficiency sectors. And in fact, it is worth noting that this stimulus line item reflects the outlines of a preexisting Department of Labor (DOL) program called Workforce Innovation in Regional Economic Development (WIRED) that aims to connect workforce and economic development to grow viable regional industry clusters. The *Blueprint* highlights WIRED as one type of supportive federal engagement in regions that is proven to spur cross-institutional, cross-government cooperation in pursuit of regional economic growth strategies.

Conclusion

The stimulus bill assembles a variety of useful R&D flows, clean energy financial provisions, and economic development grants into one package designed to significantly advance America's metropolitan innovation capacity.

What the bill does *not* do is substantially shift the national agenda in support of new innovation-related activities, especially those at a metropolitan scale. And on balance it mostly perpetuates business-as-usual through the federal government's regular programs, processes, and bureaucracy, leaving significant program transformation to future policymaking.

Nonetheless, the Recovery and Reinvestment Act—coming after years of stagnating investment—marks a welcome advance for science research, clean energy, and regional economies, with positive potential implications for the cause of driving innovation in U.S. metros and throughout the U.S. economy. Federal agency officials and motivated regional leaders should turn now to making the most of implementation to maximize ARRA's benefits on the ground.

III. HUMAN CAPITAL

The education levels of American workers are a second, increasingly important, factor in the productivity and inclusiveness of the U.S. economy.[28]

With more highly educated workers capturing the lion's share of wage gains over the past three decades, the knowledge levels of workers contribute to their productivity more than ever. Raising the skill levels of lower earners and children in lower-income families also represents a key strategy for reducing income inequality and improving social mobility. Moreover, since gains in human capital accrue and are deployed most rapidly in our major metropolitan areas—which efficiently match educated workers to firms—metro areas are a prime locale for implementing effective human capital strategies.

For these reasons, the *Blueprint* has focused attention on federal policies that would increase the levels of education and training that metropolitan workers possess, including promoting entrepreneurship and innovation in K–12 education, and augmenting direct federal support to high-performing community colleges.[29] The initiative has also highlighted policies that can bolster wages for lower-income working families, promoting labor force participation for adults and improving the educational environment for their children.[30] Adopting these policy proposals would not help metropolitan areas alone, but metros would benefit disproportionately from such changes.

The recovery package places considerable, and welcome, emphasis on spending in the areas of education and human capital. By our estimates, spending and tax measures directly related to education and training account for $125 billion in the bill, about 16 percent of the total.[31] In many respects, this spending aims to provide a backstop against inevitable state budget cuts in this area. At last count, 36 states have cut education spending or proposed such cuts because of the massive budget deficits they face this year.[32] In addition, ARRA spending on items such as workforce training anticipates the increased needs that will arise in this area given the economic downturn. But beneath the myriad provisions that "plug the dike" by investing in existing systems lie a few that may advance more meaningful reforms and lay the groundwork for future growth.

State Fiscal Stabilization Fund

The largest single education-related provision in ARRA is the **State Fiscal Stabilization Fund.** The act appropriates $53.6 billion to states in fiscal years 2009 and 2010 through this fund to help them make up funding shortfalls in the education arena.[33]

The fund has four notable parts. First, roughly $39.8 billion of the total, awarded by formula to states, will help them **maintain their funding levels** for early, elementary, secondary, and higher education funding.[34]

Second, Education Secretary Arne Duncan has referred to another **$5 billion** in the fund as the **"**Race to the Top" fund. Duncan is to use these flexible funds to provide grants to states to back innovative strategies, including: improving teacher quality in underperforming schools; collecting better data on student performance over time; and raising state standards. While most of these funds will go to governors, much must in turn be directed to local school districts.[35]

Third, within the $5 billion "Race to the Top" fund lies some **$650 million reserved for innovation,** deemed the "Invest in What Works and Innovation" fund.[36] That funding provides the secretary with wide discretion to award grants to local school districts or partnerships between local districts and non-profit organizations to advance strategies that help close the achievement gap or improve indicators like high school graduation rates. This education provision provides perhaps the greatest opportunity for coordinated, cross-sector action. In this respect, a recent *Blueprint* paper by Sara Mead and Andy Rotherham called for stepping up federal investment in educational entrepreneurship and innovation—which this fund may deliver.[37] In particular, the fund could stimulate the expansion of high-performance charter management organizations (in partnership with one or more local officials or school districts), or increase the local supply of highly effective teachers to staff those schools by investing in programs like Teach for America.

A fourth provision of the ARRA stabilization fund permits states to use the fund's final $8.8 billion, awarded via formula, for **public safety and other government services, or for school renovation and modernization** (but not construction).[38] While it is not yet clear how different states will choose to deploy these funds, they would do well to keep in mind the value of investments in modernizing their community colleges. These institutions face rising enrollments, sure to accelerate in an economic downturn, but many lack the physical capacity to serve these students consistently well.[39] Efforts to meet future workforce needs, and to improve pathways to the middle class, will depend greatly upon public two-year colleges helping more of their students complete degrees and credentials that have meaningful value in the labor market.[40]

The State Fiscal Stabilization Fund will serve primarily to protect jobs within the education sector, in line with the overall goals of the stimulus and recovery package. Yet certain provisions, if implemented strategically at the federal, state, and local levels, could greatly enhance metropolitan prosperity through improved standards, new partnerships, and reinvigorated local institutions of higher education.

Education-related infrastructure

Much attention surrounded the Senate's decision to drop spending on school construction from the final ARRA compromise package. However, tax provisions that facilitate school construction remained in the final law. Roughly $8.6 billion will be spent on new **tax-exempt bond authority for state and local governments to finance construction, rehabilitation, and repair of public school facilities**.[41] The bulk of these credits (60 percent) will be allocated directly to states, with another 40 percent reserved for school districts with large low-income populations. The package spends another $900 million to enhance the **QZAB (Qualified Zone Academy Bond) program**, which supports renovating, providing equipment, or developing curricula and personnel at charter schools in lower-income communities.[42] Whether states and localities will target these construction funds strategically, in concert with related investments and in view of variable market needs, represents a key opportunity to be explored during ARRA implementation.

The package may also improve education-related infrastructure by expanding broadband availability in public and assisted housing, and in schools and libraries (see next section on Infrastructure for further description). It reserves $7 billion for **competitive and state programs to accelerate broadband deployment in unserved and underserved areas.** Coordination between the departments of Commerce, Agriculture, Education, and Housing and Urban Development in the deployment of these funds, and among local jurisdictions in their applications, could enhance learning opportunities for students in both rural and urban low-income communities who today lack access to these technologies.

Higher education affordability

Building institutional capacity that promotes retention and completion in higher education will not happen overnight. However, a declining economy has rapidly increased overall demand for higher education.[43] To respond, ARRA makes a couple of investments on the demand side to improve higher education affordability. First, it provides roughly $16 billion to increase **Pell Grants** to needy students.[44] This funding will increase the maximum award by $500, and help meet unprecedented student demand for the grants. Second, it amends the **HOPE scholarship tax credit** in 2009 and 2010 to make it available for four years of higher education (up from two); make up to 40 percent of the credit refundable (for lower-income taxpayers who have limited income tax liability); and make textbooks an allowable expense.[45] These changes will increase the progressivity of federal aid for higher education, and could help to promote broader-based economic growth by enabling more students from lower-income backgrounds to afford college.

Worker training

Several provisions of the bill—some through traditional "workforce development" programs, others as carve-outs from related new investments—add up to about $4.7 billion in new direct spending on worker training.[46]

The bulk of the package's funding in this area is provided to programs run by the Department of Labor's Employment and Training Administration (ETA), which is responsible for implementing WIA (the Workforce Investment Act of 1998). The package reserves $4 billion for various parts of WIA, including **various formula grants to states**:[47]

- $500 million for **adult employment and training, including supportive services**

- $1.2 billion for **youth activities, including summer employment**

- $1.25 billion for **dislocated worker employment and training**

Under the legislation, ETA will award through competition a further $750 million for **worker training and placement in high growth and emerging industry sectors**, with energy efficiency, renewable energy, health care, and broadband deployment sectors receiving preference.[48] (This provision was also mentioned in the previous section on Innovation.) The legislation is silent on further guidance for these awards, but in implementing ARRA, ETA could help stimulate metropolitan collaboration by giving additional preference to applications that embrace sectoral partnerships and multi-jurisdictional approaches to skills upgrading.[49]

Finally, several larger investments in areas like infrastructure and health care set aside modest funding to train workers for jobs in those fields. Of the $4.5 billion ARRA provides for **modernizing the electric grid**, it directs $100 million to **related worker training activities**.[50] The $2.5 billion in health services funding reserves $500 million to address **health professions workforce shortages**, including $75 million through the **National Health Service Corps**.[51] And $20 million from the $27.5 billion in highway funding is set aside for **transportation and technology training.**[52] These funds will be administered across multiple agencies (Energy, Health and Human Services, Transportation) that will likely employ different criteria for awarding these grants, based largely on their existing programs, policies, and local partners. Such dispersed implementation may serve the stimulus package's wider need for speed, but may preclude more carefully considered strategies that would make multiple forms of training widely accessible to workers throughout major metropolitan areas.

Supporting work

Though we do not count them officially among "human capital" investments, the provisions of ARRA that support lower-income workers play a role in maintaining and building their human capital. As workers' incomes fall, these supports encourage them to remain at work (rather than exit the labor market entirely), and make up the gap between their lower wages and the income they need to get by. Moreover, research has shown that policies that augment parental earnings can improve learning outcomes for children in low-income families.[53]

In particular, the package's **expanded tax credits for low- and moderate-income working families** provide significant economic stimulus. Increases to the Earned Income Tax Credit, or **EITC** ($4.7 billion), have been shown to help these families pay for necessities like housing, food, clothing, and school supplies, and durable goods like furniture and appliances.[54] The expansions made to the refundable **Child Tax Credit** ($14.8 billion), and the creation of a new **Making Work Pay credit** ($116 billion), further the same goals.[55] Moreover, these expansions help to make up some of the long-term wage/price gap that many of the nation's lower-paid workers face. And most of these dollars will assist families with children.

Also of note are increases in other benefits available to working families. The package boosts **food stamp benefits** by $19.9 billion and **child care assistance** by $2 billion.[56] These investments can make it easier for parents to move into—or remain in—the workforce despite tough economic times.

Because they support workers directly, none of these investments on its own promotes metropolitan collaboration to boost human capital. But hundreds of regional efforts across the country that connect eligible families to tax credits and related benefits will undoubtedly face new demands and need additional support as these new provisions come online.[57]

Conclusion

Even this selective survey of education/human capital investment in the recovery package suggests that the overwhelming majority of ARRA human capital investments are delivered either directly to individual families or through existing programs and mechanisms (e.g., formula awards to states). This approach is consonant with the objective of quickly injecting into the economy as many federal dollars as possible. As with other parts of the package, this approach does not necessarily lend itself to strategies that coordinate related areas of investment, or promote metropolitan-wide collaborations that achieve true economies of scale. Nevertheless, a couple of important opportunities exist within the act's education and training provisions to support state and local leaders' efforts to stimulate multi-dimensional, multi-jurisdictional approaches to improving student outcomes and enhancing worker skills. Local and metropolitan leaders should avail themselves of those opportunities.

IV. INFRASTRUCTURE

America's infrastructure is a third critical national asset and a principal driver of our nation's prosperity. State-of-the-art transportation, telecommunications, and energy distribution are critical to moving goods, ideas, and workers quickly and efficiently. Maximizing the impact of the nation's infrastructure is therefore one way we can meet our historic economic, social, and environmental challenges.[58]

Yet infrastructure assets do not exist in the abstract, nor are they spread across the landscape of the nation. Rather, as the *Blueprint* makes clear, these contributors to prosperity come together and interconnect in metropolitan America.[59]

For example, the 100 largest metropolitan areas are not only home to two-thirds of the U.S. population, they are also where 72 percent of the seaport tonnage arrives and departs; where 78 percent of our interstate miles are traveled; where 92 percent of air passengers embark and transit miles are ridden, and where 93 percent of rail passengers board.[60] In that sense, the nation's major metros concentrate our key infrastructure functions as they do so many other national priorities. Investments targeted to these places provide the largest and fastest multiplier effects in terms of jobs and output.

For that reason, the *Blueprint* has proposed a series of important infrastructure policy reforms, especially pertaining to the federal transportation program, that seek to achieve critical national objectives through the advancement of metropolitan economic competiveness, social equity, and environmental sustainability. Among the advances proposed have been: the creation of a national infrastructure bank to finance innovative projects of national or multi-state importance; the establishment of a national sustainability challenge that would entice and fund partnerships that join housing, transportation, energy, and other systems across states, localities, and the private sector; and a move to a systematic infrastructure budget review.[61]

Now, with infrastructure a prominent recipient of stimulus funding, there is little question that after decades of neglect, infrastructure reform is truly getting a public hearing. ARRA provides significant money for infrastructure. It may not be as much as some state, metropolitan, or local leaders had hoped for, but by Brookings' analysis—which uses the broadest possible definitions—the recovery package directs some $126 billion to infrastructure purposes. That means infrastructure makes up fully 16 percent of the entire recovery package.

What is more, ARRA invests in a broad range of basic and strategic types of infrastructure, ranging from traditional public works, to private sector-led infrastructure components, to research and new technologies such as information and telecommunications technology. Certainly, ARRA's more than $50 billion investment in transportation may be the single highest-profile, most talked-about portion of the legislation. But the legislation also directs some $16 billion, for example, to investments dealing with energy concerns and achieving energy independence. Another $13 billion is targeted for infrastructure to help communities provide clean drinking water, dispose of wastewater, and flood control. And an "other construction" category (appropriated at $36 billion) includes categories such as housing, military, health facilities, and others.

In short, important infusions of federal funding will now flow into a variety of programs that are significant to metropolitan areas' infrastructure stock and require assessment.

Non-transport-related items

An array of important elements of the stimulus bill direct major investments toward a variety of segments of the nation's frayed infrastructure outside the much-discussed transportation realm.

To start with, the legislation directs nearly $16 billion to investments dealing with energy efficiency and renewables. These include the $4.5 billion **federal smart grid investment program** designed to modernize the nation's electricity transmission and distribution system.[62] By upgrading the outdated system the nation could potentially save, by some estimates, between $46 billion and $117 billion in additional infrastructure costs over the next 20 years, reduce carbon emissions, lower peak demand, and increase real GDP.[63] Others—such as **Weatherization Assistance** ($5 billion) and the **State Energy Program** ($3.1 billion)—

could help develop more livable and sustainable communities and help steer us toward energy independence.[64]

The **Energy Efficiency and Conservation Block Grants (EECBG)** program, financed in ARRA with $3.2 billion, is another endeavor with potentially significant direct impact on metropolitan infrastructure planning.[65] Over two-thirds of this program's money is directed to cities with over 35,000 people and counties over 200,000 to support projects and strategies to cut greenhouse gas emissions and reduce energy use. Projects and programs eligible for funding from the grants include building audits and retrofits, smart building codes, and transportation efforts to encourage car pooling, transit ridership, and telecommuting. But the biggest opportunity afforded by the grant program may well be the chance for metropolitan areas to develop community- or region-based strategies such as mixed-use and pedestrian-oriented development that lower the demand for driving. In that sense, the EECBG may provide an excellent opportunity for metropolitan leaders to develop multi-jurisdictional, multi-dimensional solutions to regional energy challenges.

Looking to another eroding set of systems, ARRA reserves another $13 billion for investments in infrastructure to help communities **provide clean drinking water, dispose of wastewater, and control flooding**.[66] These funds can help cities and older, inner-ring suburbs address the challenges associated with sometimes century-old infrastructure.

ARRA also makes possible major investments in other infrastructure. For example, more than $7 billion is now available for **competitive and state programs to accelerate broadband deployment in unserved and underserved areas**.[67] Such infrastructure is valuable to rural communities for increasing connectivity. Yet this effort will also enable the nation to understand for the first time the location of broadband service through the creation and maintenance of a national broadband inventory map.

In short, ARRA portends major infusions of stimulus spending on infrastructure systems that range far beyond familiar road and rail networks. Such infusions will help improve air quality, conserve land and natural resources, and reduce the consumption of gas and electricity and could have—if wielded intelligently—a potentially enormous impact on the shape and sustainability of U.S. metropolitan areas in the coming years.

Transportation

The largest share of infrastructure funds in the recovery package ($53 billion) is directed to transportation infrastructure. And more than half of that is eligible for spending under the existing **Surface Transportation Program (STP)**.[68] Congress gave states 120 days to obligate 50 percent of these funds. Any unobligated balances will be taken and redistributed to other states. This so-called **use-it-or-lose-it provision** is a powerful incentive to make sure the funds are spent—or at least obligated—quickly, but likely hampers the ability of states to innovate.

One reason the STP program was chosen as the vehicle for distributing these funds is its broad eligibility. STP funds may be used by states and localities for projects on any federally eligible public road or for transit capital. But non-motorized projects for bicycles and pedestrians, newer technologies such as advanced signal timing and traffic management, and environmental clean-up projects are also eligible for STP dollars.[69] ARRA makes passenger and freight rail eligible for STP funds for the first time, thereby increasing STP's flexibility. In other words, the almost total discretion the states have for deciding how, where, and on what these funds are spent provides an excellent opportunity for states to address broad objectives around economic competiveness, environmental sustainability, and social equity in their metro areas.

It is not clear the states will actually do that, however. Before ARRA became law, about half of the states released emblematic lists of their "shovel ready" projects to illustrate their plans to spend the recovery dollars.[70] To get a feel for the states' priorities, Brookings analyzed 23 states' proposed lists. The takeaway was not surprising. On average, these states expected to spend just half of their project money on projects in their largest metro areas. The share diminished when it came to roadway work (43 percent). Each of these shares is considerably less than the contribution of these areas to their states' economy (78 percent) and consistent with much other research that shows states spend transportation money disproportionately outside of metros.

Fortunately, though the state share of the STP funds makes up a large share of the recovery dollars for transportation, there remain numerous opportunities for metropolitan action and decisionmaking. Most prominently, 15.8 percent of those funds are required to be "suballocated" to the metropolitan level.[71] These funds are under the direct control of metropolitan planning organizations (MPOs) within each area, and separate and apart from whatever the states themselves spend in metropolitan areas. This is an increase over the current federal program, in which only 6.8 percent of all highway funds are under the direct decisionmaking control of metropolitan areas. Further, past Brookings analysis shows that MPOs are much more likely to fund local transit needs with STP funds than are state departments of transportation.[72]

However, certain state policies continue to dull the effects of metropolitan suballocations. Some states have developed distribution formulas that strive to spread funds evenly throughout the state regardless of size or needs. This holdover from past years of active rural highway construction ensures that built-out urban counties fail to receive a sensible share of funding. In states like North Carolina, officials consider those direct federal metropolitan investments as part of the state distribution when they calculate statewide equity.[73]

Other opportunities for metros

There are other opportunities for metropolitan areas. ARRA allocated over $8.4 billion in **funds for transit capital improvements**, most of which is slated to spent within metropolitan areas.[74] In fact, over half of the transit capital funds are directed to the 20 largest urbanized areas. This is important since a robust and diverse transportation network provides important accessibility options and can help mitigate regional air-quality problems by lowering overall automobile emissions and slowing the growth of traffic congestion. Economic benefits are also possible through development opportunities around transit stations, enhancing regional economic competitiveness as an important and attractive metropolitan amenity.

Another potentially important area of investment for metropolitan areas is the $9.3 billion to be spent on **passenger rail projects**.[75] Of that total, $1.3 billion is directed to Amtrak for maintenance and upgrades. The remaining $8 billion is intended to jump start an **American high speed rail network**. Details on the specific spatial allocation are pending a plan that the Federal Railroad Administration is to develop by April 17, 2009. With access to a safe, reliable, and convenient rail network metropolitan areas can help address climate goals, congestion problems—at both airports and on highways—and energy independence at the same time providing the infrastructure to enable them to compete in a global economic environment that has tended to favor such investments.

Last is $1.5 billion in **competitive grants that will be awarded to projects of national, regional or metropolitan significance,** based on applications from state and local governments or transit agencies.[76] Criteria will be developed by the USDOT and published by May 17, 2009 with funds to be awarded by February 2010. This is an excellent opportunity for the department to assist states and metropolitan areas in one of their hardest tasks: transcending the stovepiping of disparate transportation, housing, energy, and environmental programs that remains a serious cause of undesirable development outcomes. Projects might cluster mixed-use facilities, build mixed-income housing close to transit stations, institute congestion pricing, or extend commuter rail.

Conclusion

As the nation seeks to recover from its economic crisis by investing in infrastructure, it appears that ARRA makes some strides toward maximizing its spending results. Investments in the right kind of infrastructure in the right places can help put Americans back to work and boost the economy by rebuilding metropolitan roads, bridges, mass transit systems, and investing in rail and ports. There is, however, much more to do. As states look to expand their own economies in the current bleak fiscal environment, it is critical for there to be a greater focus on the transportation needs and challenges of our metropolitan areas—the ultimate source of national renewal.

V. QUALITY PLACES

Metropolitan areas possess a fourth characteristic that contributes to their economic primacy and helps to secure true national prosperity. They gather and strengthen the forces of innovation, human capital, and infrastructure in what we term *quality places*, whose density, diversity, and distinctiveness help achieve returns to scale on metropolitan assets.[77] Moreover, quality places provide meaningful residential, educational, and employment opportunities for people from across the income and racial/ethnic spectrum, and promote wiser use of land and other natural resources that ultimately secures more environmentally sustainable growth.

Several *Blueprint* papers have suggested ways that federal policy can support quality metropolitan places, including promoting transportation choices to expand transit and compact development opportunities, partnering with states and localities to ensure greater affordable housing opportunities in mixed-income communities, and issuing a sustainability challenge that would encourage jurisdictions within metro areas to devise cross-border strategies to reduce greenhouse gas emissions.[78]

Though ARRA does not implement any of these specific proposals, the recovery package does make several important investments in housing and community development that, if deployed wisely, can help to create and sustain quality metropolitan places. It also includes funding for significant environmental and energy conservation programs that can also bolster existing places and reduce energy use. Such programs account for approximately $34 billion in spending and foregone tax revenue, or about 4 percent of the stimulus and recovery funds. We have excluded some related measures (such as nuclear waste clean-ups, some Department of Agriculture and Department of Interior water and wildlife programs, and Army Corps of Engineers projects) that do not seem to be at the heart of metropolitan concerns.

Public and assisted housing

The package provides $4 billion to the Department of Housing and Urban Development (HUD) for short-term **capital investment in public housing**.[79] Public housing authority grantees will use those funds to accelerate planned investments in the rehabilitation and retrofitting of public housing units, making them safer and more energy efficient. Three-quarters of these funds are being delivered via HUD's existing capital fund formula, and the remaining quarter will be awarded via competition. The competitive grants are expected to leverage private sector funding or financing, particularly around energy conservation retrofits. The package also provides HUD with $250 million to make grants and loans to upgrade the **energy efficiency of Section 8 project-based units, and assisted housing for the elderly and disabled**.[80] If targeted strategically by HUD and its public housing authority partners, these investments could not only reduce the cost of housing to residents and owners (including the government), but also protect and preserve affordable housing opportunities in communities where they are most needed.

Other affordable housing

Problems in the credit markets and the broader financial services sector have created serious new challenges to financing the production of affordable housing. Fortunately, the package aims to "unstick" affordable housing development in two ways. First, it provides new direct capital investment of $2.25 billion in **low income housing tax credit projects** through grants to state housing finance agencies under HUD's HOME program.[81] Second, it creates a new program at the Treasury Department to award grants to these agencies in lieu of awarding the credits themselves.[82] State housing finance agencies should deploy these funds in ways that do not lead to further concentration of poverty and disadvantage, but follow an emerging trend of increasing the number of LIHTC units in lower-poverty—including suburban—communities.[83] The package also provides $1 billion to cities and states via the **Community Development Block Grant** program.[84] Much of that funding will likely be devoted to affordable housing; whether its expenditure is well-coordinated locally and regionally with other housing and neighborhood investments will depend on the decisions of local and state officials.

Neighborhood stabilization

As home foreclosures began to reach crisis levels in 2008, Congress authorized and funded a new effort to assist heavily affected communities in the Housing and Economic Recovery Act. This Neighborhood Stabilization Program (NSP), awarded $3.92 billion to states and local communities, via formula grants, to help them acquire, rehabilitate, and redevelop foreclosed and abandoned homes in the private market. Importantly, this amount was far less than what would be required to address the full scale of the foreclosure crisis at the neighborhood level. So while these funds ostensibly targeted high-need communities, they did not necessarily help those areas that are best-equipped to use limited funding strategically to stabilize and sustain communities with longer-run market potential.

It is therefore notable that a second round of NSP funding provided through ARRA is fully competitive in nature. HUD will award $2 billion to **state and local governments, nonprofit entities, and consortia of nonprofit entities to help them further mitigate the secondary, community-level impacts of the foreclosure crisis**.[85] The legislative language specifies that HUD give preference to grantees with demonstrated capacity to execute projects and leverage related resources. At the same time, the act permits HUD to expend a portion of the funding on capacity building, to assist smaller suburban communities that face tremendous challenges but have little experience or fiscal ability to handle these sorts of problems. Implementation of the act may fulfill the Metro Program's call for a new competitive NSP round that more fully leverages metro-scaled partnerships between public, private, and non-profit entities to tackle the foreclosure crisis in "weak" and "strong" markets alike.[86]

Local economic development

ARRA invests additional amounts in low-income communities via an increase in the **New Markets Tax Credit (NMTC)**. The act raises the amount of equity investments in community development entities against which the NMTC may be claimed in 2009 and 2010.[87] The credit supports investment in business and real estate development in lower-income areas; over its first eight years the program helped community developers attract over $12 billion in investments. Treasury's Community Development Financial Institutions (CDFI) Fund allocates tax credit authority under the NMTC program. Given rising needs in metropolitan America, the program should place emphasis on funding applications that coordinate these investments strategically with other market-oriented housing and transportation investments in urban and suburban communities.

Recovery Zone Economic Development Bonds ($10 billion) and **Recovery Zone Facility Bonds** ($15 billion) are two additional tax provisions in ARRA that could bolster quality placemaking efforts.[88] States will receive the bond authority based on their employment losses, and then reallocate the funds to counties and large municipalities (population above 100,000) based on those jurisdictions' job losses, for use in recovery zones. As defined in the statute, Recovery Zones have significant foreclosures, poverty, unemployment or general distress; or are reeling from base closures; or are an existing empowerment zone or renewal community. The economic development bonds can be used to fund job training, education, infrastructure, public facilities, or capital expenditures. As with New Markets tax credits, local decision makers should use these bonds to build on the assets of Recovery Zones and in conjunction with other funding streams to create strong communities.

Energy efficiency efforts

ARRA includes $5 billion for **weatherization assistance programs** to help families earning incomes below 200 percent of the poverty line (or, less than $44,100 for a family of four).[89] The program will pay for the installation of weatherization materials and renewable energy systems for cooling and heating. The Department of Energy (DOE) will allocate these funds to states according to existing formulas. DOE will also give states $3.1 billion through the **State Energy Program**, again via existing formulas (this provision of ARRA is also discussed in the Infrastructure section of the brief).[90] The grants must go towards energy efficiency and renewable energy programs, such as building retrofits. Joint actions across state lines are also a priority. Presumably, the funds should go towards the implementation of state energy plans (required by the Energy Policy and Conservation Act), which themselves must include efficient lighting standards for public buildings, energy efficiency standards for new and renovated buildings, promotion of public transportation or carpooling, and procurement policies that promote energy efficiency.

Perhaps most promising for metro areas is the $3.2 billion ARRA directs towards e**nergy efficiency block grants (EECBGs)** (also discussed in the Infrastructure section).[91] More than 80 percent of those dollars are allocated according to the formulas specified in the Energy Independence and Security Act (EISA), which directs 68 percent of funds to local and county governments. Local governments must use the funds to reduce fossil fuel emissions, reduce total energy use, and improve energy efficiency in transportation, buildings, and other sectors. EISA lists no fewer than 14 ways that local governments can fulfill the goals of the law, including the catch-all category of "any other appropriate activity determined by the secretary," and notes that localities must take into account the work of neighboring jurisdictions when they draw up their plans for reducing energy use.[92] The underlying law's flexibility and its instruction to think about other communities can make it a useful tool for metropolitan collaboration and coordination.

The energy efficiency block grant funds are key building blocks of the DOE-HUD collaboration on weatherization. As noted above, HUD will direct billions of ARRA funds to public housing weatherization. DOE and HUD have created an interagency task force to, among other things, coordinate the expenditure of weatherization funds, the EECBG, and other recovery funds on the ground.[93] The departments will also develop common guidelines for energy efficiency retrofits and measurement tools. Metro area leaders have long been frustrated by the lack of coordination between funding streams coming from different agencies, which limit the flexibility and creativity of on-the-ground problem solvers.[94] This collaborative effort around ARRA funds could be a welcome change.

ARRA also gives state and local governments the power to issue an additional $1.6 billion in **clean renewable energy bonds** (CREBs) and an additional $2.4 billion in **qualified energy conservation bonds** (QECBs).[95] According to a useful report by PolicyLink and Green Jobs Now, CREBS can be used to finance renewable energy generating facilities, while QECBs can finance capital projects to reduce energy consumption in public buildings, mass commuting facilities, demonstration projects for green-building technology, and energy efficiency public education campaigns.[96]

Water resources

ARRA sets aside some $13 billion for programs to help communities provide clean drinking water, dispose of wastewater, and control flooding (these provisions of ARRA are also discussed in the Infrastructure section of the brief). This includes $6 billion for **state clean water and drinking water revolving loan funds**.[97] These funds provide low-interest loans for short-term projects including wastewater treatment, control of non-point source pollution, watershed management, and improvements to infrastructure that provides drinking water. If there are sufficient applications, 20 percent of the funds will be for projects that "address green infrastructure, water or energy efficiency improvements or other environmentally innovative activities." Also included is another $155 million allocation for grants to local and state governments and non-profits for **watershed and flood prevention projects**.[98] States control these funds, as they control so many of ARRA's dollars. States could allocate these funds according to "fix it first" guidelines, thereby shoring up existing infrastructure in metropolitan areas. Or, they could consciously advance new forms of sustainable infrastructure development in metros.

Conclusion

The wide range of policies summarized in this section of the brief underscores the fact that a quality place comprises many elements, from energy-efficient and affordable housing to low greenhouse gas emissions. With the possible exception of the competitive NSP funds or the Recovery Zone bonds, ARRA does not steer state or local governments towards new or innovative ways to create communities that combine diversity, opportunity, and sustainability. But motivated actors in metropolitan areas can perhaps find ways to bend and combine ARRA's funds to build better places.

VI. METRO GOVERNANCE

It matters intensely, meanwhile, how ARRA—like other bodies of policy—supports or undercuts the cause of cohesive metropolitan governance.

Metropolitan governance, as distinguished from metropolitan *government*, is simply the regularized process of jurisdictions within a metropolitan area coordinating, collaborating, sharing information, planning across borders, and generally thinking and acting like a cohesive unit rather than an uneasy collection of rival municipalities.

Given the importance of this work, Brookings' *Blueprint* has consistently advocated federal, state, and local reforms that would strengthen the ability of metropolitan-area actors to leverage, link, and align to maximum effect their assets. [99]

Metros' ability to aggregate and link assets is critical because metropolitan areas epitomize the "multiplier" effect of concentration, clustering, and agglomeration, as noted by economists ranging from Adam Smith to Nobel Laureate Paul Krugman.[100] Metropolitan assets also must be leveraged and linked because, as noted throughout this report, the real geography of our economy is metropolitan in scope—not municipal. Labor and housing markets and transportation networks operate at the metropolitan scale. Metropolitan land-use and place making brings particular advantages, in compact development patterns that preserve rural lands and valuable ecosystems, and in a wide array of transportation options that lead to fewer miles driven and lower greenhouse gas emissions.

Federal policy, however, does not "see" metropolitan areas, with a few exceptions (even though the federal Office of Management and Budget (OMB) and Census Bureau define metropolitan boundaries). And so metropolitan coordination most often has to come "bottom up:" from metropolitan areas themselves—or states. And local coordination is in fact emerging from metropolitan areas across the country, as evidenced by metropolitan mayors' caucuses in Chicago and Denver and the emerging caucus in Seattle. Dozens of metros are beginning to think and act regionally, with many, such as Salt Lake City and Sacramento, taking a first step towards enhanced governance with regional "visioning" processes or "blueprints" that have led municipalities to agree to include regional growth principles and integrated land use and transportation strategies in their local comprehensive plans.[101]

ARRA resembles federal policy as a whole in that it does not much address metropolitan governance.[102] As has been noted already in this brief, the bulk of the billions the recovery package disburses will go through existing delivery systems, and will push jurisdictions towards metropolitan or regional action no more or less than they are pushed already (which is not very much).

And yet, the best way to achieve ARRA's goals of achieving economic prosperity, recovery and efficiency could very well be metropolitan collaboration and coordination. For that reason, it is important to read ARRA with an eye towards metropolitan governance, and it is encouraging that such an assessment reveals several areas of implicit opportunity.

Business as usual

The federal government's programs, policies, and delivery systems do not much concern themselves with metropolitan collaboration. To be sure, the federal government made a gesture towards metropolitan governance with the establishment in the 1960s of metropolitan planning organizations (MPOs) as conduits of federal transportation funds. However, MPO discretion is squeezed by state governments from above and local governments from below.

ARRA mirrors this absence of metropolitan engagement. Categorical and block grants in housing, transportation, and the environment, for example, generally do not provide incentives for metropolitan planning or governance. In fact, block grant flows tend to hew strictly to existing boundaries of states, counties, and localities. A portion of funding for each block grant goes to states, and another portion goes to county or local governments based on population, program-specific indicators of need, or a combination of both. And new federal funds also tend to reinforce jurisdictional fragmentation. To take one example, HUD sent roughly $128 million in the first round of Neighborhood Stabilization Program (NSP) funding directly to the Chicago metropolitan area but the money was dispersed among seven municipalities and seven counties in two states.[103]

In the case of ARRA, one could argue that the speed with which the bill was drafted, and the speed with which it must be implemented, leave no leeway for experiments in new forms of governance or program design. Moreover, it is not clear how many of the nation's 363 metropolitan areas have the capacity and will to act in a more unified, collaborative, and integrated fashion within the tight timeframes demanded by the legislation. And yet, it is not the case that ARRA's drafters made no effort whatsoever to be ambitious or creative. The law establishes a new health information technology bureaucracy and program.[104] It also establishes new and demanding standards of transparency and accountability. ARRA's drafters could presumably have found more room to encourage metropolitan actors to work together to maximize the return of the billions of dollars that will stream into their borders. But such a statutory push will have to wait for other legislation. In the meantime a modicum of space remains for creative metropolitan actors to bent ARRA's programs to their regional priorities.

Competitive grants

ARRA's competitive grants could be an exception to the law's business-as-usual funding flows, if only because the grants have no pre-existing guidelines and therefore present agencies with an opportunity to do things differently. If agencies want to give a strong push towards metropolitan collaboration, the competitive grant guidelines would be the place to do it. They are where ARRA might change, in some small way, the geography of governance from the top down.

The most promising competitive grants look to be **grants for "projects of national, regional, or metropolitan significance"** from the Department of Transportation, **Job Training Funds** from the Department of Labor and the Employment and Training Administration, and **Neighborhood Stabilization Program funds** from the Department of Housing and Urban Development. The transportation grants explicitly invoke a metropolitan scale in their description. Early guidance on the priorities of the Employment and Training Administration mentions "regional sector strategies." And consortiums of non-profit groups can compete for HUD's NSP funds—these consortiums could include groups from many jurisdictions in a hard-hit metropolitan area.

In addition, ARRA provides $3.2 billion for an existing Department of Energy block grant program established under the **Energy Independence and Security Act** that may be put to interesting metropolitan uses; $2.8 billion will be distributed by formula, and $400 million by competitive grant.

It is, of course, possible that the competitive grant criteria will not promote new collaborations or ideas. The criteria must align with ARRA's stated purposes, which focus on speed, economic recovery, job creation, economic efficiency, and state and local stabilization. The OMB guidance to agencies on ARRA instructs agencies to "Consider weighting selection criteria to favor applicants for assistance with demonstrated ability to deliver programmatic result and accountability objectives included in Recovery Act."[105] These strictures make business as usual the easiest, safest course. But even if the competitive grants do not explicitly reward metropolitan collaboration, jurisdictions can still use these funds in creative and coordinated ways, just as they can with formula funds.

Department of Transportation grants: ARRA's transportation vision includes $1.5 billion for competitive grants for projects that "will have a significant impact on the Nation, a metropolitan area, or a region."[106] (This grant program is also discussed in the Infrastructure section.) The explicit invocation of a metropolitan area indicates that this provision is, of all of ARRA's many elements, the one most likely to spark and reward metropolitan action. Surface transportation is so evidently and inherently metropolitan that it seems like a natural start for cross-border collaboration. MPOs are not listed as potential grant recipients; the law instead names state governments, local governments, and transit agencies as eligible competitors. This, again, suggests an avenue for new forms of metropolitan coordination.

Individual project grants will be between $20 million and $300 million, and a wide swath of roadway, public transportation, freight rail, passenger rail, and port projects are permitted. DOT will publish selection criteria by May 17, and award funds by next February.

Worker training funds: The recovery bill creates a new $750 million competitive grant program within the Employment and Training Administration at the DOL for **training and placing workers in fast-growing and emerging industries** (described also in the Innovation and Human Capital sections of this paper).[107] Two-thirds of the funds go towards research and job training programs in energy efficiency and renewable energy, including energy-efficient building, construction and retrofits; renewable electric power; the energy efficient drive train industry; biofuels; deconstruction; energy efficiency assessment; and sustainable manufacturing processes and products.[108] Health-care training has priority for the remaining $250 million.

The words of the ARRA provision do not indicate why this might be fertile ground for metropolitan efforts, but the history of the provision does. The Senate Appropriations Committee report described the original Senate version of the grant as follows: "The Committee is particularly interested in the Department awarding grants that support immediate strategies for regions and communities to meet their need for skilled workers, as well as longer-term plans to build targeted industry clusters with better training and a more productive workforce."

Industry clusters are metropolitan in nature; collections of producers, suppliers and affiliated companies spill over jurisdictional lines, but still need reasonably close proximity. It is possible that the original intent of the Senate committee will animate the competitive grant guidelines, and preference will go towards regional training initiatives that harness the power and multiple points of entry that clusters provide. Out of the six categories of grants described in this section of the bill, this competitive grant program is the only one that does not specify a particular grant recipient. Three other programs go to states, one to the Youthbuild program, and one for the dislocated workers' assistance national reserve.

According to OMB guidance, a synopsis of the competitive grant criteria must be available March 23, with final guidelines available 10 days later, and a list of awards announced in late May. As of March 23, the DOL had not published the synopsis of competitive grant criteria on Grants.gov. A Training and Employment notice from the department's Education and Training Administration (ETA) explains that its recovery priorities include "Investments connected to economic growth objectives through regional sector strategies aligned with economic development, education, including community colleges, business and labor organizations, and other partners for high-growth industries such as green jobs, healthcare and advanced manufacturing."[109] That language at least gestures towards the fact that labor markets operate at a scale that transcends borders.

Neighborhood Stabilization Program funds: ARRA allocates $2 billion for competitive grants under the **Neighborhood Stabilization Program.**[110] (The Quality Places section of the paper also notes these NSP funds.) The funds can be used to acquire and redevelop foreclosed properties. States, local governments, non-profits and consortia of non-profits can compete for the funds, and preference goes to grantees in areas with high foreclosure rates and, as is the ARRA hallmark, a demonstrated "capacity to execute projects, leveraging potential, and concentration of investment to achieve neighborhood stabilization." The capacity factor is a wildcard here. It may favor metro-wide organizations, or coalitions of local governments; many suburban governments hit hard by foreclosures are completely overwhelmed in dealing with a problem that is unprecedented for them. Or, the capacity factor may favor central city governments for whom the foreclosure crisis is new only in its magnitude, but not in the underlying problem. The secretary may use up to $200 million specifically for capacity building and support, so under-resourced suburbs may have an advantage in fighting for a fraction of the dollars.

The mechanics of metropolitan collaboration, with or without explicit federal encouragement, can be delicate and time-consuming. In the Chicago metropolitan area, two suburban clusters in Cook County have formed interjurisdictional housing collaboratives, which are addressing coordination on a number of housing issues, including use of the first round of NSP funds. Over the past three months, representatives from the jurisdictions involved have met bi-weekly, building up the necessary trust and strength of relationships to make the collaboration successful. Each of the collaboratives aims to hire a coordinator to manage both the requests for funds from the State of Illinois and Cook County, and the alignment of spending once the funds are received. The Metropolitan Planning Council (MPC) and Metropolitan Mayors Caucus, two regional organizations, have coordinated various letters and resolutions for individual suburban city councils to ratify in support of the collaboration. Eventually, the communities plan to craft a binding intergovernmental agreement about how the participating jurisdictions will use the first round of NSP funds. In addition, regional and state agencies are interested in using this model as a strategy for applying for the second round of NSP funds, released under ARRA.

The efforts are already yielding rewards. The communities have told MPC that they have realized valuable efficiencies through the process. The state, county, and area developers (who may redevelop areas devastated by foreclosures) are enthusiastic about having a single point of contact—the collaborative coordinators—to reduce the challenges of dealing with the 270 municipalities in the metropolitan area.

Grant competition criteria for the second round of NSP funds will be available May 3, and applications must arrive at HUD 75 days after that.

Energy efficiency and conservation grants: ARRA pours $3.2 billion into the energy efficiency block grant (EECBG) program established by the Energy Independence and Security Act of 2007 (EISA).[111] (The Infrastructure and Quality Places sections also describe this block grant program.) This block grant program provides an opportunity for metropolitan leaders to create multi-jurisdictional energy efficiency strategies. The grants go to states or local governments but aim to “maximize benefits for local and regional communities” and can be used for smart growth zoning codes, transportation plans, energy retrofits, and other strategies to reduce fossil fuel emissions and promote energy efficiency in transportation, building, and other sectors.[112]

There is a subtle tilt towards metropolitanism in the EISA block grant process. Local governments that receive the block grant must, over the course of a year, develop an energy efficiency and conservation strategy that takes into account the plans that adjacent units of local governments receiving EISA block grants have for their grant funds.[113] Local governments must also share information about their strategies with their states in order to “maximize the energy efficiency and conservation benefits” of the grants. This “taking into account” process could lead to coordination and cooperation, if the relevant metropolitan actors are willing. Any transportation related efforts under the block grants presumably would be enhanced by metropolitan coordination, since transportation is inherently metro wide.

More than 80 percent of those dollars are allocated according to the formulas specified in EISA, section 543, which directs 68 percent of funds to local and county governments. The DOE did not issue program guidance or specific allocation formulas pursuant to the 2007 bill; the department is working on those regulations now.

Another $400 million in EECBGs will be awarded by competitive grant. ARRA is silent on guidelines for these funds. As with the employment training funds, the key dates are March 23 for a synopsis of the grant guidelines, late March or early April for final guidelines, and May 20th for award announcements. As of March 23, the competitive grant guidelines had not been published on Grants.gov, nor on the agency’s website for EECBG.

Regional extension centers for health information technology: Section 3012 of ARRA creates new regional entities, **Health Information Technology Regional Extension Centers** (regional centers).[114] These centers, supported by $300 million in funding, are tasked with enhancing and promoting the adoption of health information technology. These centers are supposed to draw on a broad base of expertise from industry, universities, state governments, and, critically, are called on to use “the expertise and capability that exists in federal agencies other than” the Department of Health and Human Services.

It is not clear from the text of the legislation whether “regional” refers to metropolitan areas, or multi-state regions, along the lines of the existing multi-state DHHS regions.[115] Health information technology advocates have pointed to New York City's Primary Care Information Project and the Massachusetts eHealth Collaborative as the models for these regional extension centers.[116] John Halamka, an expert in medical information technology, believes that the law will create 40 to 60 centers, with a geographic scope ranging from metropolitan to multi-state in sparsely populated areas. In his view, "the metropolitan scale is exactly the right level of granularity for most EHR [electronic health record] rollouts. Only in areas with limited population density would I consider anything more regional/state."[117] The draft description for establishing the regional centers will be published 90 days after ARRA's passage, or approximately mid-May.

Regional health extension centers are a far cry from actual metropolitan governance. But if they are metropolitan entities, that would be a signal that the federal government recognizes that the metropolitan scale is the right one for information and best-practice exchange. The mandate to bring together private, public, and non-profit resources and experience is perhaps an acknowledgement of the diverse range of actors relevant to policy making at the metro level.

At best, the regional centers could be a way for metropolitan areas to leverage their universities and medical institutions ("eds and meds"), since the regional centers must be affiliated with a U.S.-based non-profit institution or organization. Existing eds and meds could be positioned to attract federal investment and provide a focal point for future metropolitan action. The federal government will provide up to half of the capital and annual operating budget of the centers for up to four years. The ability of centers to draw financial help from other sources will be a factor in winning federal support. Metropolitan area leaders could decide to rally around likely regional centers to provide the necessary local support to draw federal funds.

The centers could lead to great advances in health information technology and no change at all in regional action either on the ground or at the federal level. But perhaps they will become a model of thinking, acting, and designing programs at the metro scale that could be replicated in creative ways by other federal agencies and implemented in U.S. metro areas.

Conclusion

When it comes to encouraging metropolitan collaboration and coordination, ARRA is only as useful as the federal programs through which its billions of dollars flow. As evidenced by the regional health information extension centers, where there is not an existing delivery system, ARRA may find some room for metropolitan action. Otherwise, there is no particular steering in that direction, unless agencies inject one in competitive grant criteria. Determined and creative people in well-organized metros can decide how to use the funds to advance metropolitan goals and build on metropolitan relationships that pre-dated ARRA. Perhaps their efforts, and their successes, will be a model for a more metropolitan-oriented federal policy in the future.

VII. TRANSPARENCY

Information remains one of the cheapest, most cost-effective policy tools available for stimulating game-changing innovation. If metros are to work to their maximum potential, and if federal policy is to support metros appropriately, then there has to be a substantial information base to diagnose problems, analyze reform options, and measure outcomes.

Unfortunately, the federal government has been uneven (or worse) in providing information. In recent years, the government has failed to maintain congressionally mandated programs to track federal spending, eliminated analytical offices and publications, and cut statistical agency funding. "MetroPolicy" and other *Blueprint* papers have stressed the need to rebuild the nation's crumbling information infrastructure, by, for example, investing in better small-area demographic and economic statistics, improving student tracking in education, and producing more of the fine-grained transportation and energy-sector data public and private decision-makers need.[118]

Tied to these priorities has been a continuing call for a broader definition of accountability that focuses more on outcomes than inputs, and impacts rather than procedures.

ARRA has provisions in place to provide a wealth of information to let metropolitan policymakers, members of Congress, and the public track the billions of recovery funds. As President Obama said in his weekly radio address after Congress passed the recovery bill, "[O]ur goal must be to spend these precious dollars with unprecedented accountability, responsibility, and transparency….Ultimately, this is your money, and you deserve to know where it's going and how it's spent."[119]

ARRA explicitly allocates about one-twentieth of one percent of its funds (approximately $400 million) for accountability and transparency.[120] As part of the accountability and transparency effort, ARRA mandates two important sources of information on how the recovery money is flowing outward from the federal government: the Recovery.gov website and recovery-specific portions of agency websites.[121] On balance, these two provisions reflect a well-intentioned but as yet ambiguous, not well-specified, effort to allow government, researchers, and the public to examine vast programs with a cutting-edge information system. But missing almost entirely is the sort of accountability that seeks to measure and benchmark long-term outcomes.

Recovery.gov (the ARRA website)

According to ARRA and OMB guidance to agencies, the **Recovery.gov** website will provide two types of information. First, it will post agency-wide and program specific spending plans; weekly agency reports detailing recovery spending to date; and monthly reports revealing recovery spending to date by state and congressional district.[122]

Second, Recovery.gov will offer access to detailed information on individual grants and contracts, including recipient name, award amount, agency and program source, transaction type, the recipient's location, and the primary location of performance under the award (including the city, State, congressional district, and country). For each mandatory or other entitlement program, Recovery.gov will publish information on the distribution of funds by state, county, or "other appropriate geographic unit." And for each contract, the website will provide information on the competitiveness of the contracting process and a summary of the scope of work.[123]

The award-specific information provided on Recovery.gov will be collected through the processes by which the federal government currently tracks its spending. However, for Recovery.gov to provide current, accurate, detailed data, the federal government must address current visible deficiencies in these existing processes. In particular OMB must give the agencies the proper incentives, guidance, and instructions needed to provide information accurately and on time.

Recovery.gov may not be a complete, integrated, user-friendly repository of available information on each award, for several reasons. First, the availability of subaward data on Recovery.gov is uncertain. Many ARRA dollars will go through a multi-step award process: The federal government will send money to state and local governments and agencies (the primary recipients of the funds), and these entities will in turn pass the funds through to another agency or contractor, which in turn may pass funds to other organizations, and so on. Subawards could be a key source of information on the fine-grained, metropolitan level geography of ARRA spending—if they are fully disclosed. But the availability of subaward data on Recovery.gov is uncertain. ARRA indicates that the project data available on Recovery.gov should be consistent with what is required for publication on the USASpending.gov website. While the law that established USASpending.gov (the Federal Funding Accountability and Transparency Act of 2006, co-sponsored by then-Senator Obama) requires the disclosure of detailed subaward information the site as of January 1, 2009, at present the government cannot collect those data under existing reporting systems. It is not clear how this hurdle will be overcome for Recovery.gov.

Second, Recovery.gov will have to overcome substantial technical challenges in order to integrate project data directly collected by federal agencies. A separate section of ARRA directs agencies to post, on their own websites, project-specific information from recipients that they will collect outside of existing reporting systems, including project completion status; the purpose, cost, and rationale of infrastructure investment projects; and estimated jobs impacts. While ARRA does not mandate that Recovery.gov integrate this information into its award-specific files, OMB staff report they are considering creating a new on-line reporting system for all recipients that in concept could allow integration with existing reporting systems that post to Recovery.gov. But integration is no simple matter. For example, while the Recovery.gov database will be organized by award, agency-collected reports will be by recipient. One award could fund more than one project or activity; conversely, on project or activity could be funded by multiple awards.

Third, Recovery.gov may not be as flexible in its functioning, and therefore may not provide as much useful data, as metropolitan stakeholders would want. The White House indicates that the website will have a search function that allows users to identify projects by contractor, state, and congressional district, a relatively limited number of search terms. As the website evolves, it is likely the range of search terms will be broader, e.g., agency, program, grant recipients, and other levels of geography. It is possible that the website also will allow users to sum and rank expenditures by recipients, programs, and geographies. Because of the difficulties in verifying project-specific job impacts, OMB staff say they are considering not enabling aggregation of job impacts data.

Recovery.gov, if supplied with current, accurate, detailed data and with the proper functionality, would allow metro area stakeholders to understand and evaluate the flow and impacts of recovery fund expenditures. Further, a well-functioning website could serve as the template for providing metro-relevant information for all federal award spending, not just that appropriated by ARRA. What Recovery.gov will not offer, unfortunately, are rich resources for assessing the longer-term impacts of recovery package spending.

Recovery portions of agency websites

While ARRA intends for Recovery.gov to be the primary portal for public information, in a separate section (the “Jobs Accountability Act”) ARRA also directs federal agencies to collect information for publication on agency recovery-specific web pages.[124]

At first glance, the agency websites may be a richer source of information about where ARRA funds are being spent. Unfortunately, it appears that the ARRA section mandating Recovery.gov and the one laying out the Jobs Accountability Act were written by two different hands and do not refer to each other at all. Consequently, as noted earlier, Recovery.gov is not directed to incorporate project-specific data collected by agencies for their own websites.

Specifically, under the Jobs Accountability Act section, ARRA instructs each federal agency to post quarterly reports from each entity to which it provides recovery funds (whether grants, loans, or contracts). Each quarterly report, the first of which is due July 10th, must include:

- the total amount of recovery funds received from the agency;
- the amount of received recovery funds expended or obligated to projects or activities; and
- for each project/activity for which recovery funds were expended or obligated—

- name and description;
- completion status;
- estimated the number of jobs created and retained;
- for state and local government infrastructure investments, the purpose, total cost, and rationale of the agency for providing recovery funds; and
- detailed information on any subcontracts or subgrants (including recipient name, award amount, agency and program source, transaction type, the location of the recipient, and the primary location of performance under the award, including the city, State, congressional district, and country).[125]

The project-specific information collected in reports to agencies yet not required for inclusion in Recovery.gov include recipient funding received, recipient project/activity list, project/activity-specific completion status, jobs created and retained, and infrastructure investment information. As noted, OMB staff are considering creating an online reporting system for recipients, but incorporating this information into the Recovery.gov awards database would be technically challenging.

The nature of data to be collected regarding jobs created and retained is unclear; OMB will be providing guidance on this topic. One uncertainty concerns the completeness of the data. Current OMB guidelines make clear that only the prime recipient is required to report—but will the prime recipient need to collected and describe the job impacts of every subaward, i.e. provide a complete accounting of job impact?

Another uncertainty concerns the nature of the job impacts to be captured. OMB has three options. It could require reporting of jobs directly created by a project (e.g. the number of people building a new bridge). It could require reporting of direct, indirect, and induced jobs (e.g., the jobs of building the bridge, the jobs at firms that provide materials for the bridge, and the jobs in local stores at which the bridge-builders and their suppliers spend their paychecks). It could require reporting of all of the above plus estimated jobs created and retained in businesses that benefit from the new bridge (e.g. greater competitiveness due to faster transportation times and lower transportation costs). The third option would be the most beneficial for metros, but also the most challenging to produce and justify.

Finally, as noted earlier, OMB staff may not enable aggregate analyses of the jobs data in light of the data's lack of verification. Nationwide job impacts would be calculated through macroeconomic analyses by the Council of Economic Advisers.

Although agency websites will be a rich source of project-specific information, they may be cumbersome for use by metro stakeholders interested in looking at statistics by geography. It is in stakeholders' interests that Recovery.gov serves as the central repository for all metro-relevant data and information on recovery expenditures.

Otherwise, it bears noting here, too, that the value of the Jobs Accountability Act information provisions of the recovery act remains quite narrow. On balance, the emphasis in these provisions falls heavily on process-oriented proceduralism, and efforts to curb fraud, waste, and abuse in grantmaking. Ideally there would have been more focus on the results of ARRA programs—the long-term impacts of the investments, which won't show up either in contracting data or through short-term measures, say of total jobs created and retained in each quarter.

Conclusion

ARRA mandates the collection and dissemination of a valuable array of information on the obligation, expenditures, and impacts of recovery funds, with geographic detail. However, lack of explicit provisions to integrate on Recovery.gov information collected under separate sections of the law, as well as uncertainties regarding Recovery.gov functionalities for analysis indicates that the information needs of metropolitan area stakeholders will not be fully met until these concerns are addressed.

VIII. CONCLUSION

As ARRA was coming into shape, pundits and policymakers in the capital took to repeating White House Chief of Staff Rahm Emanuel's dicta that policymakers should "never let a serious crisis go to waste."[126] The phrase highlighted a belief that when old systems have broken down, leaving disarray and uncertainty, the best way forward is through new ideas, new concepts, and bold action.

ARRA is bold in many ways—most notably in its price tag, its timeline, and its efforts to track billions of dollars of taxpayer funds. But it is not innovative in its form. Speed became the enemy of government reinvention, in this case, as the winter's economic crisis bred a kind of conservatism that preferred tried and true delivery systems to untested plans and arrangements. In that sense, while the absence of a metropolitan reform focus in ARRA is entirely understandable given the circumstances, it means that the law is in many respects "a missed opportunity."

And yet, numerous openings remain that could allow state and local actors to capture at their level opportunities that were missed at the federal one. States, for example, retain enormous power to either empower or foreclose on metropolitan problemsolving to make the most of the opportunities the recovery package holds out for of region-scaled, coordinated implementation. And likewise, creative players at the local and metro level can and should exert themselves to weave disparate spending programs into something more transformative.

In fact, one argument for America's dispersed system of government is that states and localities can be more nimble and creative than the federal behemoth. States and localities accordingly should move with alacrity to make the most of what remains limited in statute. Working together, state and local governments should seize the opportunities ARRA affords them and use their ARRA allotments to try some new ideas, make some linkages that need to be made, and lay the foundation for a new way of doing business within metropolitan areas.

We hope this brief will provide a rough map to the opportunities that this crisis-driven bill presents for an inspired brand of implementation.

Beyond that, federal, state, and local leaders should remember that the recovery package is only the beginning. Starting right away, the regular federal budget and legislative processes and reauthorizations arguably offer more promising opportunities to grapple with real reform that works to ensure local and federal resources will be optimally linked and aligned for the good of the nation.

Appendix A
Innovation-Related Items In The American Recovery And Reinvestment Act

Department/Agency/ Program	Spending Description	Amount/Value	Spending Timeframe
SELECTED R&D ACTIVITIES			
NIH	General medical science and health care research and repair and modernization of facilities	$10.4 billion	The majority of funding will likely go through regular, already scheduled NIH grant review cycles. A portion, $800 million deployed at the discretion of the NIH Director, is mandated to give priority to 2-year, short-term, competitively-awarded, special research grants
NSF	Competitive grants to university-based and other researchers, construction of facilities, and support for education and human capital development in science	$3 billion	The bulk of the funding would be distributed through NSF's regular peer review process for grants and competitive awards, with funds to remain available until Sept. 30, 2010
NIST	Laboratory research and construction	$600 million	
DOE Office of Science	Basic research, laboratory research, facilities upgrades and construction	$1.6 billion	
DOE Energy Efficiency and Renewable Energy R&D *(see also Infrastructure)*	Applied research, development, demonstration, and deployment	$2.5 billion, with $800 million set aside for biofuels and $400 million for geothermal	
DOE ARPA-E	A new agency to support cutting-edge energy technology research projects that bridge the gap between basic research and commercial product development	$400 million	
DOE Fossil Energy R&D Program *(see also Infrastructure)*	Fossil energy R&D, and carbon capture, geological sequestration, and "clean coal" projects and training	$3.4 billion	
DOD Energy Research *(see also Infrastructure)*	R&D, testing, and evaluating of energy generation, efficiency, transmission, regulation, and storage within military installations and operational forces	$300 million	The Secretary of Defense must report on the progress of the stimulus effort within 1 and 2 years

NASA *(see also Infrastructure)*	Earth science climate research missions	$400 million	Funds are to remain available until September 30, 2010
NOAA	Climate modeling	$170 million	
SELECTED FINANCIAL INCENTIVES FOR CLEAN ENERGY INNOVATION			
Grants to assist U.S. companies in the manufacturing of advanced battery system *(also included in Infrastructure)*	Awards to manufacturers of advanced battery systems and vehicle batteries, including advanced lithium ion batteries, hybrid electrical systems, component manufacturers, and software designers	$2 billion	
Alternative Fueled-Vehicles Pilot Grant Program	Grants to expand the use of alternative fueled and advanced technology vehicles and the installation and acquisition infrastructure necessary to support them	$300 million	DOE has already issued a Funding Opportunity Announcement for this stimulus amount, which modifies an earlier grant program
Innovation Technology Loan Guarantees	Temporary extension of DOE's Loan Guarantee program, defining eligible projects to include renewable energy projects that generate electricity or thermal energy and facilities that manufacture related components, transmission systems, and innovative biofuels projects	$ 6 billion; funding for biofuels projects is limited to $500 million	DOE may enter into guarantees until September 30, 2011, which is the cut-off date for commencing construction on eligible projects
Clean Renewable Energy Bonds *(see also Housing and Sustainability)*	Increasing the limit for bonds for certain renewable energy and "clean coal" facilities' capital expenditures incurred by governmental bodies, public power providers or cooperative electric companies	$500 million ($1.6 billion increase in bond allocation)*	
Clean Energy Production and Investment Tax Credits	Temporary extensions, removal of cap limits on earlier tax incentives for production and	$18 billion *	In many cases, individual tax incentives can be applied to eligible activities conducted at some point over the next 1-5 years, usually 2-5

	investment in wind, solar, hydro, bio, geo, biomass; and temporary allowances for grants in lieu of tax credits given current market conditions. Also included is the Advanced Energy Investment Credit—a new tax credit for manufacturing facilities used in the production of clean energy technology		years, sometimes shorter
SELECTED ITEMS FOR REGIONAL ECONOMIC DEVELOPMENT			
DOL- ETA's worker training and placement in high growth and emerging industry sectors *(see also Human Capital and Metropolitan Governance)*	Competitive grants to prepare workers for careers in energy efficiency, renewable energy, health care, wireless and broadband deployment, advanced manufacturing, and other high demand industry sectors identified by local workforce areas	$750 million, with $500 million set aside for energy efficiency and renewable energy training and priority given to the health care sector for the remaining	Final guidelines on grant criteria are expected to be available by March 23, 2009 and a list of awards announced in late May
Economic Development Assistance Programs	Funds to leverage private investment, stimulate employment, and increase incomes in economically distressed communities. A third of the funds may be transferred to federally authorized, regional economic development commissions.	$150 million, with $50 million set aside to help revitalize those communities suffering from sudden and severe economic downturn from corporate restructuring	EDA has already issued a Funding Opportunity Announcement for this stimulus amount and will accept applications on an ongoing basis

NOTES:
* Indicates that the dollar value of this particular item is based on a ten-year period, as estimated by the Joint Committee on Taxation

APPENDIX B
HUMAN CAPITAL ITEMS IN THE AMERICAN RECOVERY AND REINVESTMENT ACT

Department/Agency/ Program	Spending Description	Amount/Value	Spending Timeframe
STATE FISCAL STABILIZATION FUND			
Funds to maintain state support for education	Formula grants to states to help them maintain funding levels for early, elementary, secondary, and higher education	$39.8 billion	Within two weeks of receipt of an approvable application, DOE will provide a state with 67 percent of its allocation. A state will receive the remaining portion after DOE approves the state's plan. DOE anticipates this phase-two funding will begin July 1, 2009 Funds are available for obligation at the state and local levels until Sept. 30, 2011
"Race to the Top" Fund	Competitive grants to states to improve teacher quality in underperforming schools, collect better data on student performance over time, and raise state standards	$4.35 billion	
"Invest in What Works and Innovation" Fund	Competitive awards to school districts or nonprofit organizations that have made significant gains in closing achievement gaps	$650 million	
Funds for public safety and other government services, or for school renovation and modernization	States may choose to use these funds for facilities upgrades but not construction	$8.8 billion	
SCHOOL CONSTRUCTION AND MODERNIZATION			
Bonding authority for public school facilities	New tax-exempt bond authority to states and local school districts to finance construction, rehabilitation, and repair of public school facilities	$8.6 billion*	
Qualified Zone Academy Bond Program	Expansion and extension of bond authority to states and localities for renovations, equipment, and curricula and personnel development at charter schools in lower-income communities	$900 million*	Effective on bonds issued after December 31, 2008

HIGHER EDUCATION AFFORDABILITY			
Increase in Pell Grants	Grants to needy students to help support their post-secondary education	$15.8 billion, which will likely increase the maximum individual award by $500	Funds will remain available through September 30, 2011
American Opportunity Tax Credit	A temporary expansion of the HOPE scholarship tax credit to make it available for four years of higher education (up from two); make up to 40 percent of the credit refundable (for lower-income taxpayers); and make textbooks an allowable expense	$13.9 billion*	
SELECT ITEMS FOR WORKER TRAINING			
DOL –ETA's Implementation of the Workforce Investment Act of 1998 (WIA)	Formula grants to states to support adult training, and employment, youth activities (including summer employment), and dislocated worker employment and training	$4 billion, with $500 million set aside for adults, $1.2 billion for youth, and $1.25 for dislocated workers	ETA will issue the necessary grant award documents so that funds will be available to states as soon as possible, but no later than March 19, 2009. States are urged to obligate funds within 30 days of receipt. All funds must be expended by June 30, 2011
DOL- ETA's worker training and placement in high growth and emerging industry sectors *(see also Innovation and Metropolitan Governance)*	Competitive grants to prepare workers for careers in energy efficiency, renewable energy, health care, wireless and broadband deployment, advanced manufacturing, and other high demand industry sectors identified by local workforce areas	$750 million, with $500 million set aside for energy efficiency and renewable energy training and priority given to the health care sector for the remaining	Final guidelines on grant criteria are expected to be available by March 23, 2009 and a list of awards announced in late May

NOTES:
* Indicates that the dollar value of this particular item is based on a ten-year period, as estimated by the Joint Committee on Taxation

APPENDIX C
INFRASTRUCTURE ITEMS IN THE AMERICAN RECOVERY AND REINVESTMENT ACT

Department/Agency/ Program	Spending Description	Amount/Value	Spending Timeframe
SELECT ITEMS RELATED TO ENERGY EFFICIENCY AND RENEWABLES			
Smart Grid Investment Program	Funding program designed to modernize the nation's electricity transmission and distribution system	$4.5 billion	
Weatherization Assistance *(see also Housing and Sustainability and Metropolitan Governance)*	The program will pay for the installation of weatherization materials and renewable energy systems for families earning incomes below 200 percent of the poverty line	$5 billion	
State Energy Program *(see also Housing and Sustainability)*	Formula grants to states for energy efficiency and renewable energy programs, such as building retrofits	$3.1 billion	
Energy Efficiency and Conservation Block Grant Program *(see also Housing and Sustainability and Metropolitan Governance)*	Established by the Energy Independence and Security Act of 2007 (EISA), these grants go to states or local governments to use for smart growth zoning codes, transportation plans, energy retrofits, and other strategies to reduce fossil fuel emissions and promote energy efficiency	$3.2 billion, with $2.8 billion allocated according to EISA and another $400 million awarded competitively	DOE is working on regulations for deploying the share of funds subject to specific EISA provisions For the competitive portion of the block grants, final program guidelines are expected by March 23, 2009 and grantees announced by May 20th
SELECT ITEMS RELATED TO WATER INFRASTRUCTURE			
Drinking and Waste Water Programs *(see also Housing and Sustainability)*	Investments in infrastructure to help communities provide clean drinking water and dispose of wastewater	$8.4 billion	The Interior program ($1.0 billion) must submit quarterly status report to Congress, beginning within 45 days of enactment
Flood Control Programs *(see also Housing and Sustainability)*	Investments in infrastructure to help communities provide flood control	$4.8 billion	The Corps of Engineers programs ($4.6 billion) must submit quarterly status reports to Congress, beginning within 45 days of enactment The Boundary Commissions program ($0.2 billion) must submit a spending plan within 90 days

SELECT ITEMS RELATED TO TECHNOLOGY INFRASRUCTURE			
Broadband	Competitive and state programs to accelerate broadband deployment in underserved areas	$7.2 billion	The Rural Business program ($2.5 billion) must submit a proposed and current spending plan every quarter to Congress, beginning 90 days after enactment
Health Information Technology	Funding for ‘telehealth’ and other infrastructure projects under the ‘Indian Health Services’ account	$85 million	
TRANSPORTATION INFRASTRUCTURE			
Intercity Rail (FRA and Amtrak)	Funding for passenger rail	$9.3 billion, with $1.3 billion for Amtrak and $8 billion for new high speed rail	The FRA must publish program guidelines for the high speed rail program within 120 days of enactment Federal Railroad Administration is develop the specific spatial allocation for the high-speed rail by April 17, 2009
DOT Multimodal Competitive Grants *(see also Metropolitan Governance)*	Grant to states, localities, and transit agencies, for nationally, regionally, or metro significant projects	$1.5 billion, with individual project grants between $20 million and $300 million	States have 120 days to obligate 50 percent of their STP funds DOT will publish grant criteria by May 17, 2009 and award funds by February 2010. Priority shall be given to projects that can be completed within three years of ARRA’s enactment
Transit	Funds for transit capital improvements, most of which is slated to be spent within metropolitan areas	$8.4 billion, with $6.9 billion for transit capital assistance, $750 million for fixed guideway investment, and $750 million for capital investment grants	Recipients have 180 days to obligate 50 percent of their funds or face redistribution. Similarly, recipients have one year to obligate all of their funds or face redistribution This does not apply to the ‘capital investment grants’ program
Aviation (FAA and NASA)	Funds capital improvements at the nation’s airports and aviation-related NASA research	$1.45 billion, with $1.3 billion for capital improvements and $150 million for NASA research	The FAA must award at least 50 percent of the funding within 120 days, and the remainder within one year
Energy *(see also Innovation)*	Includes funding for advanced battery manufacturing, transportation electrification, and acquisition of advanced-fuels vehicles	$3 billion	
Environmental	Funding to reduce	$300 million	

Protection	diesel emissions		
Seaports	Assistance to small shipyards	$100 million	Recipients must obligate funding within 180 days of receipt
Highways and Bridges (FHWA and Coast Guard)	Funds for roadway projects, including new capacity, operations, and maintenance	$27.64 billion, with $27.5 billion going to FHWA and $142 million to the US Coast Guard for bridge work	States have 120 days to obligate 50 percent of their funds or face redistribution. Similarly, states have one year to obligate all of their funds or face redistribution. Direct funding to urbanized areas is not subject to redistribution until the one year mark
Security (U.S. Customs, FEMA, and TSA)	These include grants for land borders of entry construction and multimodal security	$1.7 billion, including $420 million for border construction, $300 million for security, and $1 billion for aviation screening	Land borders of entry construction and aviation screening require expenditure plans within 45 days
INFRASTRUCTURE RESEARCH			
DOD Energy Research *(see also Innovation)*	R&D, testing, and evaluating of energy generation, efficiency, transmission, regulation, and storage within military installations and operational forces	$300 million	The Secretary of Defense must report on the progress of the stimulus effort within 1 and 2 years
DOE Energy Efficiency and Renewable Energy R&D *(see also Innovation)*	Applied research, development, demonstration, and deployment	$2.5 billion, with $800 million set aside for biofuels and $400 million for geothermal	
DOE Fossil Energy R&D Program *(see also Innovation)*	Fossil energy R&D, and carbon capture, geological sequestration, and "clean coal" projects and training	$3.4 billion	
NASA *(see also Innovation)*	Earth science climate research missions	$400 million	Funds are to remain available until September 30, 2010
Health IT	Investments towards enhanced digital health information exchanges	$2.05 billion	A detailed spending plan must be submitted within 90 days of enactment with full reports every six months, beginning November 1, 2009
NATURAL INFRASTRUCTURE			
Non-defense Environmental Cleanup		$483 million	
Uranium Enrichment Decontamination and Decommissioning Fund		$390 million	
Defense		$5.1 billion	

Environmental Management			
Environmental Cleanup	Improves current toxic cleanup sites and adds new ones	$900 million, including $600 for Superfund, $200 million for LUST, and $100 million for Brownfields	
Various Department of Interior Programs	Programs to help maintain the country's natural resources, including hazardous fuels reduction, wildland fire management, and the National Park System	$1.9 billion	
Rural Watershed and Flood Programs	Funding to protect floodplains, rebuild dams, and improve water quality	$340 million	
OTHER CONSTRUCTION			
General Construction	Funding to support construction for varied purposes, including education, energy, environmental protection, health facilities, housing, military, research facilities, and security	$36.7 billion	

APPENDIX D
HOUSING, SUSTAINABILITY, AND QUALITY PLACES ITEMS IN THE AMERICAN RECOVERY AND REINVESTMENT ACT

Department/Agency/ Program	Spending Description	Amount/Value	Spending Timeframe
SELECT HOUSING-RELATED ITEMS			
Capital investment in public housing	Grants to public housing authorities for rehabilitation and retrofitting of public housing units	$4 billion, with three-fourths allocated through exiting HUD formula and one-fourth via competitive grants	HUD must complete formula allocations within 30 days of enactment and award competitive funding by September 30, 2009. All funding expires on September 30, 2012 Recipient public housing agencies must obligate 60 percent of funding within one year of receipt and 100 percent within two years of receipt. Any unobligated balances at either point will be reobligated to other authorities
Energy efficiency investments	Grants and loans to upgrade the energy efficiency of Section 8 project-based units, and assisted housing for the elderly and disabled	$250 million	Recipients should obligate funding within 2 years of receipt All funding expires on September 30, 2012
Direct investment in projects using Low-Income Housing Tax Credits (LIHTC)	Direct capital investment in LIHTC projects via HUD's HOME program and grants in lieu of credits	$2.7 billion	Housing credit agencies must commit at least 75 percent of HOME funding within one year of enactment, while recipients must expend 75 percent of funding within two years and 100 percent within three years. Any unobligated funding at either point will be reobligated to other authorities
Community Development Block Grant Program	Grants to cities and states that will likely be devoted to affordable housing	$1 billion	Funding available until September 10, 2010
SELECT ITEMS RELATED TO NEIGHBORHOOD DEVELOPMENT			
HUD Neighborhood Stabilization Program *(see also Metropolitan Governance)*	Authorized by the Housing and Economic Recovery Act of 2008, these funds go to state and local governments, nonprofit entities, and consortia of nonprofit entities to help further mitigate the foreclosure crisis' secondary, community-level impacts	$2 billion, with $200 million set aside for capacity building and support	Grant competition criteria will be available 75 days after ARRA's passage, and applications must arrive at HUD 75 days after that

New Markets Tax Credit (NMTC)	Expand NMTC for credits claimed in 2009 and 2010 to support investment in business and real estate development in lower-income areas	$800 million (raises the equity limit against which credits can be claimed in 2009 and 2010 by $1.5 billion)*	Must be used by the end of fiscal year 2009
Recovery Zone Economic Development and Facility Bonds	Bonding authority to states to raise funds that are then distributed to counties and large municipalities (based on job losses) to stimulate economic development that addresses poverty, foreclosures, and unemployment	$4.9 billion ($15 billion in facility bonds; $10 billion in economic development bonds)	The bonds must be issued before January 1, 2011
SELECT ENERGY-RELATED ITEMS			
Weatherization Assistance *(see also Infrastructure)*	The program will pay for the installation of weatherization materials and renewable energy systems for families earning incomes below 200 percent of the poverty line	$5 billion	
State Energy Program *(see also Infrastructure)*	Formula grants to states for energy efficiency and renewable energy programs, such as building retrofits	$3.1 billion	
Energy Efficiency and Conservation Block Grants *(see also Infrastructure and Metropolitan Governance)*	Established by the Energy Independence and Security Act of 2007 (EISA), these grants go to states or local governments to use for smart growth zoning codes, transportation plans, energy retrofits, and other strategies to reduce fossil fuel emissions and promote energy efficiency	$3.2 billion, with $2.8 billion allocated according to EISA and another $400 million awarded competitively	DOE is working on regulations for deploying the share of funds subject to specific EISA provisions For the competitive portion of the block grants, final program guidelines are expected by March 23, 2009 and grantees announced by May 20th
Clean Renewable Energy Bonds *(see also Innovation)*	Increasing the limit for bonds for certain renewable energy and “clean coal” facilities’ capital expenditures incurred by governmental bodies, public power providers or cooperative electric	$500 million ($1.6 billion increase in bond allocation)	

	companies		
Energy Conservation Bonds	Financing for capital projects to reduce energy consumption in public buildings, mass commuting facilities, green-building demonstration projects, and energy efficiency public education campaigns	$690 million ($2.4 billion increase in bond allocation)	
SELECT WATER-RELATED ITEMS			
Drinking and Waste Water Programs *(see also Infrastructure)*	Investments in infrastructure to help communities provide clean drinking water and dispose of wastewater	$8.4 billion	The Interior program ($1.0 billion) must submit quarterly status report to Congress, beginning within 45 days of enactment
Flood Control Programs *(see also Infrastructure)*	Investments in infrastructure to help communities provide flood control	$4.8 billion	The Corps of Engineers programs ($4.6 billion) must submit quarterly status reports to Congress, beginning within 45 days of enactment The Boundary Commissions program ($0.2 billion) must submit a spending plan within 90 days

NOTES:
* Indicates that the dollar value of this particular item is based on a ten-year period, as estimated by the Joint Committee on Taxation

APPENDIX E
METROPOLITAN GOVERNANCE POTENTIAL IN THE AMERICAN RECOVERY AND REINVESTMENT ACT

Department/Agency/ Program	Spending Description	Amount/Value	Spending Timeframe
POTENTIAL FOR NEW REGIONAL ENTITIES			
Health Information Technology Regional Extension Centers	New regional entities that are called to draw on expertise across different federal agencies and from industries, universities, state governments, and others to promote health information technology	$300 million	Draft description on establishing these new centers will likely be released by the end of May 2009
SELECT COMPETITIVE GRANTS			
DOL- ETA's worker training and placement in high growth and emerging industry sectors *(see also Innovation and Human Capital)*	Competitive grants to prepare workers for careers in energy efficiency, renewable energy, health care, wireless and broadband deployment, advanced manufacturing, and other high demand industry sectors identified by local workforce areas	$750 million, with $500 million set aside for energy efficiency and renewable energy training and priority given to the health care sector for the remaining	Final guidelines on grant criteria are expected to be available by March 23, 2009 and a list of awards announced by May 20th
HUD Neighborhood Stabilization Program *(see also Housing and Sustainability)*	Authorized by the Housing and Economic Recovery Act of 2008, these funds go to state and local governments, nonprofit entities, and consortia of nonprofit entities to help further mitigate the foreclosure crisis' secondary, community-level impacts	$2 billion, with $200 million set aside for capacity building and support	Grant competition criteria will be available May 3, and applications must arrive at HUD 75 days after that
Energy Efficiency and Conservation Block Grants *(see also Infrastructure and Housing and Sustainability)*	Established by the Energy Independence and Security Act of 2007 (EISA), these grants go to states or local governments to use for smart growth zoning codes, transportation plans, energy retrofits, and other strategies to reduce fossil fuel emissions and promote energy efficiency	$3.2 billion, with $2.8 billion allocated according to EISA and another $400 million awarded competitively	DOE is working on regulations for deploying the share of funds subject to specific EISA provisions For the competitive portion of the block grants, final program guidelines are expected by March 23, 2009 and grantees announced by May 20th

DOT Multimodal Competitive Grants *(see also Infrastructure)*	Grant to states, localities, and transit agencies, for nationally, regionally, or metro significant projects	$1.5 billion, with individual project grants between $20 million and $300 million	States have 120 days to obligate 50 percent of their STP funds DOT will publish grant criteria by May 17, 2009 and award funds by February 2010. Priority shall be given to projects that can be completed within three years of ARRA's enactment

NOTES

[1] Bureau of Labor Statistics.

[2] For a detailed catalog of financial institution stabilization activities, see ProPublica's analysis at propublica.org/special/show-me-the-tarp-money. Information on the recent auto industry bailouts can be found in the International Herald Tribune's March 16, 2009 article by Louis Uchitelle, titled "Railroad Bailout May Offer a Model for Detroit," available at www.iht.com/articles/2009/03/16/business/16rail.php.

[3] Christina Romer, "The Case for Fiscal Stimulus: The Likely Effects of the American Recovery and Reinvestment Act." Remarks presented at the University of Chicago, February 27, 2009.

[4] See, for example, Alan Berube, "MetroNation: How U.S. Metropolitan Areas Fuel Prosperity" (Washington: Brookings, 2007) and Mark Muro, Bruce Katz, Sarah Rahman, and David Warren, "MetroPolicy: Shaping a New Federal Partnership for a Metropolitan Nation" (Washington: Brookings, 2008).

[5] Ibid.

[6] Unpublished memorandum for the Brookings Institution Metropolitan Policy Program by Michael Porter, November 12, 2007.

[7] The American Recovery and Reinvestment Act (ARRA), (H.R. 1-1).

[8] Peter Orszag, Letter to Chairman David Obey, January 27, 2009. Available at http://majorityleader.gov/docUploads/OrszagHouseRecovery012709-Obey.pdf.

[9] Romer, "The Case for Fiscal Stimulus."

[10] Initial Brookings assessment of a selection of states' proposed lists of projects they will fund with ARRA transportation money shows spending levels in large metros considerably less than the contribution levels of these areas to their states' economy. For an early look at tensions between state and metropolitan priorities, see Nick Wingfield and Leslie Eaton, "States, Cities in Tug-of-War Over Stimulus Funds," *The Wall Street Journal,* February 20, 2009. The story reports the fact that Washington state's initial plan for spending the state government's $341 million share of the combined $492 billion in federal highway aid that will go to state and local jurisdictions in Washington included no projects in the city of Seattle, the heart of the state's economy and population.

[11] See generally Muro and others, "MetroPolicy."

[12] See Berube, "MetroNation" and Muro and others, "MetroPolicy."

[13] Muro and others, "MetroPolicy."

[14] The *Blueprint* papers referenced here are Robert Atkinson and Howard Wial, "Boosting Productivity, Innovation, and Growth Through a National Innovation Foundation," (Washington: Brookings Institution, 2008); Karen Mills, Elisabeth Reynolds, and Andrew Reamer, "Clusters and Competitiveness: A New Federal Role of Stimulating Regional Economies," (Washington: Brookings Institutions, 2008); James Duderstadt and others, "Energy Discovery-Innovation Institutes: A Step Toward America's Energy Sustainability," (Washington: Brookings Institution: 2009).

[15] Specifically, the stimulus language extends and removes caps of some previously existing tax provisions, and in some cases, allows for temporary election of grants over credits. ARRA also authorized a brand new investment tax credit geared toward manufacturers of technologies used for clean energy production. For a run-down of these financial incentives and estimates of the total value over 10 years see Dewey & LeBoeuf LLP, "American Recovery and Reinvestment Act of 2009: Key Energy Provisions" available at

www.deweyleboeuf.com/files/News/e29f4d18-cfa2-42d1-a139-0f9f232f1380/Presentation/NewsAttachment/ce204d70-1a98-407f-9c7e-16acef64a693/ClientAlert_20090203.pdf (March 2009). Also see Jesse Jenkins, "Detailed Summary of Energy Investments in Stimulus," *Breakthrough Blog,* February 13, 2009. Available at www.thebreakthrough.org/blog/2009/02/full_summary_of_energy_investm.shtml (March 2009). The total value of the stimulus tax package over ten years is estimated at $480.5 billion by the stimulus summary by ProPublica, available at www.propublica.org/special/stimulus-plan-taxcut-list.

[16] American Association for the Advancement of Science, "Final Stimulus Bill Provides $2.5 Billion for Federal R&D" available at www.aaas.org/spp/rd/stim09c.htm (February 2009).

[17] ARRA, Division A, Title VIII, Department of Health and Human Services, National Institutes of Health (H.R. 1-61); ARRA, Division A, Title II, National Science Foundation (H.R. 1-17).

[18] ARRA, Division A, Title IV, Department of Energy, Fossil Energy Research and Development (H.R. 1-25); Science (H.R. 1-25); Advanced Research Projects Agency-Energy (H.R. 1-26); ARRA, Division A, Title III, Department of Defense, Research, Development, Test, and Evaluation (H.R. 1-19); ARRA, Division A, Title II, Science, National Aeronautics and Space Administration (H.R. 1-17); ARRA, Division A, Title II, Department of Commerce, National Oceanic and Atmospheric Administration (H.R. 1-15). The R&D share of the stimulus appropriation to DOE's Office of Energy Efficiency and Renewable Energy (EERE) is available at http://apps1.eere.energy.gov/news/daily.cfm/hp_news_id=156.

[19] ARRA, Division A, Title II, Department of Commerce, National Institute of Standards and Technology (H.R. 1-15).

[20] ARRA, Division B, Title I, Energy Incentives, Increased Limitation on Issuance of New Clean Renewable Energy Bonds, (H.R. 1-208); AARA, Division A, Title III, ARRA, Division A, Title IV, Department of Energy, Energy Efficiency and Renewable Energy (H.R. 1-24). A specific breakdown is available from DOE's EERE office. ARRA, Division A, Title IV, Department of Energy, Innovative Technology Loan Guarantee Program (H.R. 1-26). The estimate on how much private investment the stimulus loan guarantees would leverage comes from the Joint Explanatory Statement of the Committee of Conference on Division A of ARRA.

[21] ARRA, Division B, Title I, Energy Incentives (H.R. 1- 205-207); ARRA, Division B, Title I, Tax Incentives for Business, Credit for Investment in Advanced Energy Facilities (H.R. 1- 231).

[22] Dewey & LeBoeuf LLP, "American Recovery and Reinvestment Act of 2009."

[23] U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, "DOE to Expediate Disbursement of Funds Received via Stimulus Act" available at http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=12257 (February 2009).

[24] For more information on DOE's Alternative Fuel and Advanced Technology Vehicles Pilot Program, see "DOE to Award Up to $300M in Stimulus Bill Funding for Projects to Expand Use of Alt-Fuel and Advanced Technology Vehicles" available at www.greencarcongress.com/2009/02/doe-to-award-up.html (February 2009).

[25] ARRA, Division A, Title II, Department of Commerce, Economic Development Assistance Programs (H.R. 1-13).

[26] Economic Development Administration, " $150 Million in U.S. Economic Development Administration Funds Now Available Via the American Recovery and Reinvestment Act to Create Jobs and Boost Development in Areas Hard Hit by Recession" available at www.eda.gov/xp/EDAPublic/NewsEvents/PressReleases/PRWashington031109.xml (March 2009).

[27] ARRA, Title VIII, Department of Labor, Training and Employment Services (H.R. 1-59).

[28] See generally, Berube, “MetroNation,” and Muro and others, “MetroPolicy.”

[29] Sara Mead and Andrew Rotherham, “Changing the Game: The Federal Role in Supporting 21st Century Educational Innovation” (Washington: Brookings Instiution, 2008); Sara Goldrick-Rab and Alan Berube, “Stimulating America’s Community Colleges” (Washington: Brookings Institution, 2009).

[30] Alan Berube, David Park, and Elizabeth Kneebone, “Metro Raise: Boosting the Earned Income Tax Credit to Help Metropolitan Workers and Families” (Washington: Brookings Institution, 2008).

[31] This total includes (over 10 years): $44.8 billion in education-related provisions of the State Fiscal Stabilization Fund; $8.8 billion in other State Fiscal Stabilization Fund dollars, which may include school renovation and modernization; $2.1 billion for Head Start and Early Head Start; $13 billion for Title I funding; $12.2 billion in special education funding; $9.5 billion in school construction/modernization tax credits; $15.8 billion in Pell Grants; $13.9 billion for the American Opportunity Tax Credit; and $4.7 billion in worker training.

[32] Nicholas Johnson, Phil Oliff, and Jeremy Koulish, “Most States Are Cutting Education” (Washington: Center on Budget and Policy Priorities, 2009).

[33] ARRA, Division A, Title XIV, State Fiscal Stabilization Fund (H.R. 1-165).

[34] ARRA, Division A, Title XIV, State Fiscal Stabilization Fund, Section 14001, 14002, and 14003 (H.R. 1-165-167).

[35] ARRA, Division A, Title XIV, State Fiscal Stabilization Fund, Sections 14001(c), 14006, (H.R. 1-165, 169).

[36] ARRA, Division A, Title XIV, State Fiscal Stabilization Fund, Section 14007 Innovation Fund (H.R. 1-170).

[37] Mead and Rotherham, “Changing the Game.”

[38] ARRA, Division A, Title XIV, State Fiscal Stabilization Fund, Section 14002(b) (H.R. 1-166).

[39] A separate pot of money for higher education facilities was in the original House and Senate bills, but was struck during conference.

[40] Goldrick-Rab and Berube, “Stimulus for America’s Community Colleges.”

[41] ARRA, Division B, Title I, Subtitle F, Part III, Section 1521 (H.R. 1-241).

[42] ARRA, Division B, Title I, Subtitle F, Part III, Section 1522 (H.R. 1-244).

[43] See, e.g., Lisa Foderaro, “Well-Regarded Public Colleges Get a Surge of Bargain Hunters.” *The New York Times*, March 2, 2009; p. A1.

[44] ARRA, Division A, Title VII,General Provisions, Section 806 (H.R. 1-76).

[45] ARRA, Division B, Title I, Part I, Section 1004 (H.R. 1-199).

[46] This excludes, for example, the increase in Pell Grant funds that may help many students pay for occupationally oriented training at an institution of higher education.

[47] ARRA, Division A, Title VIII, Training and Employment Services (H.R. 1-58-59).

[48] ARRA, Division A, Title VIII, Training and Employment Services (H.R. 1- 59).

[49] Workforce intermediaries that are part of the National Fund for Workforce Solutions are examples of high-performance organizations that take this approach; see www.nfwsolutions.org.

[50] ARRA, Division A, Title IV, Electricity Delivery and Reliability (H.R. 1-24).

[51] ARRA, Division A, Title VIII, Heath Resources and Services (H.R. 1-61).

[52] ARRA, Division A, Title XII, Highway Infrastructure Investment (H.R. 1-93).

[53] See, e.g., Virginia Knox, Cynthia Miller, and Lisa A. Gennetian, “Reforming Welfare and Rewarding Work: A Summary of the Final Report on the Minnesota Family Investment Program” (New York: MDRC, 2000).

[54] ARRA, Division B, Title I, Subtitle A, Section 1002 (H.R. 1-198).

[55] ARRA, Division B, Title I, Subtitle A, Section 1001, 1003 (H.R. 1-195, 199).

[56] ARRA, Division A, Title I, Section 101 (H.R; 1-6); for child care subsidies, see ARRA, Division A, Title VIII, Payments to States for the Child Care and Development Block Grant, (H.R. 1-64).

[57] See, e.g., Alan Berube, “EITC Outreach Campaigns” (Washington: Brookings Institution, 2004).

[58] See Robert Puentes, “A Bridge to Somewhere: Rethinking American Transportation for the 21st Century” (Washington: Brookings Institution, 2008).

[59] See Berube, “MetroNation” and Muro and others, “MetroPolicy.”

[60] See Puentes, “A Bridge to Somewhere” and Robert Puentes and Adie Tomer, “The Road…Less Traveled: An Analysis of Vehicle Miles Traveled Trends in the U.S.” (Washington: Brookings Institution, 2008).

[61] See Puentes, “A Bridge to Somewhere;” see also Robert Puentes, “Leveraging Infrastructure Now and for the Future” (Washington: Brookings Institution, 2008) and Bruce Katz and Robert Puentes, “Memo to the President: Invest in Long-Term Prosperity” (Washington: Brookings Institution, 2009).

[62] ARRA, Division A, Title IV, Department of Energy, Electricity Delivery and Energy Reliability (H.R. 1-24).

[63] U.S. Department of Energy, "Smart Grid: Enabler of the New Energy Economy," Electricity Advisory Committee, 2008.

[64] ARRA, Division A, Title IV, Department of Energy, Energy Efficiency and Renewable Energy (H.R. 1-24).

[65] Ibid.

[66] ARRA, Division A, Title I, Department of Agriculture, Rural Water and Waste Disposal Program Account (H.R. 1-4); Title IV, Department of the Army, Corps of Engineers-Civil *(All Programs)* (H.R. 1-20 through 1-23); Department of the Interior, Water and Related Resources (H.R. 1-23); Title VII , Environmental Protection Agency, State and Tribal Assistance Grants (H.R. 1-55); Title XI, Department of State, International Boundary and Water Commission, United States (H.R. 1-89).

[67] ARRA, Division A, Title I, Department of Agriculture, Distance Learning, Telemedicine, and Broadband Program (H.R. 1-4); Title II, Department of Commerce, Broadband Technology Opportunities Program (H.R. 1-14).

[68] ARRA, Division A, Title XII, Department of Transportation, Highway Infrastructure Investment (H.R. 1-92).

[69] 23 U.S.C. 133(b).

[70] The state DOT lists do not include all the transportation projects proposed in a state. However, they are indicative of the states' transportation plans.

[71] These suballocated funds are specifically designated for areas of each state with an urbanized area population of over 200,000. There are also allocations for areas under 200,000 and for areas less than 5,000. See 23 U.S.C. 133(d)(3).

[72] Robert Puentes and Linda Bailey, "Improving Metropolitan Decision Making in Transportation: Greater Funding and Devolution for Greater Accountability," in *Taking the High Road: A Metropolitan Agenda for Transportation Reform,* B. Katz and R. Puentes, eds., (Brookings Institution, 2005).

[73] Stephen Jackson, "At the Crossroads: Recommendations for the Future of Transportation in North Carolina," North Carolina Budget and Tax Center, 2008.

[74] ARRA, Division A, Title XII, Department of Transportation, Transit Capital Assistance (H.R. 1-95).

[75] ARRA, Division A, Title XII, Department of Transportation, Capital Assistance for High Speed Rail Corridors and Intercity Passenger Rail Service (H.R. 1-94); Capital Grants to the National Railroad Passenger Corporation (H.R. 1-95).

[76] ARRA, Division A, Title XII, Department of Transportation, Supplemental Discretionary Grants for a National Surface Transportation System (H.R. 1-89).

[77] See, generally, Berube, "MetroNation" and Muro and others, "MetroPolicy."

[78] Marilyn Brown and others, "Shrinking the Carbon Footprint of Metropolitan America" (Washington: Brookings Institution, 2008); Puentes, "A Bridge to Somewhere", chapter VI; see also, generally, Muro and others, "MetroPolicy," pp 82-84.

[79] ARRA, Division A, Title XII, Department of Housing and Urban Development, Public Housing Capital Fund (H.R. 1-100).

[80] ARRA, Division A, Title XII, Department of Housing and Urban Development, Assisted Housing and Energy and Green Retrofit Investments (H.R. 1-108). In addition to $250 million for energy retrofits, the package provides $2 billion to assisted housing to make up for shortfalls in funding project-based Section 8 rental assistance contracts.

[81] ARRA, Division A, Title XII, Department of Housing and Urban Development, Home Investment Partnership Program (H.R. 1-106).

[82] ARRA, Division B, Title I, Subtitle G, Sec. 1602 (H.R. 1-248).

[83] Lance Freeman, "Siting Affordable Housing: Location and Neighborhood Trends of Low Income Housing Tax Credits in the 1990s" (Washington: Brookings Institution, 2004); Kirk McClure, "The Low Income Housing Tax Credit Goes Mainstream and Moves to the Suburbs." *Housing Policy Debate* 17(3)(2006): 419-446.

[84] ARRA, Division A, Title XII, Department of Housing and Urban Development, Community Development Fund (H.R. 1-103).

[85] ARRA, Division A, Title XII, Department of Housing and Urban Development, Community Development Fund (H.R. 1-103).

[86] Alan Mallach, "Stabilizing Communities: A Federal Response to the Secondary Impacts of the Foreclosure Crisis" (Washington: Brookings Institution, 2009).

[87] This provision costs approximately $800 million over 10 years (2009 to 2018). ARRA, Division B, Title I, Economic Recovery Tools, Increase in New Markets Tax Credits (H.R. 1-238).

[88] Recovery Zone Bonds cost approximately $5 billion over 10 years (2009 to 2018). ARRA, Division B, Title I, Economic Recovery Tools, Allocation of Recovery Zone Bonds (H.R. 1-234-236).

[89] ARRA, Division A, Title IV, Department of Energy, Energy Efficiency and Renewable Energy (H.R. 1-24).

[90] Ibid.

[91] Ibid.

[92] 42 U.S.C. 17151 et seq,; Title V, Subtitle E of Energy Independence and Security Act of 2007.

[93] U.S. Department of Energy press release, February 27, 2009, available at www.energy.gov/news2009/print2009/6959.htm.

[94] See, for example, Muro and others, "MetroPolicy" p. 61.

[95] These two provisions will cost approximately $1.2 billion over 10 years (2009 to 2018). ARRA, Division B, Title I, Energy Incentives, Increased Allocations Of New Clean Renewable Energy Bonds and Qualified Energy Conservation Bonds (H.R. 1-208).

[96] Radhika Fox and others, "Bringing Home the Green Recovery," available at http://www.greenforall.org/resources/recoveryusersguide.

[97] ARRA, Division A, Title VII, Environmental Protection Agency, State and Tribal Assistance Grants (H.R. 1-66).

[98] ARRA, Division A, Title 1, Department of Agriculture, Watershed and Flood Prevention Operations (H.R. 1-3).

[99] Mark Muro and others, "MetroPolicy."

[100] See Alan Berube, "MetroNation."

[101] Mark Muro and others, "MetroPolicy."

[102] ARRA, Principles and Purposes (H.R. 1-1, 2).

[103] See NSP Local Government Allocations Summary, available at http://www.hud.gov/offices/cpd/communitydevelopment/programs/neighborhoodspg/. The $128 million figure is the sum of the funds sent to Chicago, Cicero, Elgin, Joliet, Cook Co., DuPage Co., Kane Co., Lake Co., McHenry Co.,and Will Co. in Illinois, and Gary, Hammond, and Lake Co. in Indiana. These grants do not include any money sent directly to states that the states in turn allocated to Chicagoland.

[104] ARRA, Division A, Title XIII, "Health Information Technology for Economic and Clinical Health Act" (HITECH Act).

[105] OMB Guidance M-09-10, February 18, 2009, Section 3.6, page 21.

[106] ARRA, Division A, Title XII, Supplemental Discretionary Grants for a National Surface Transportation System (H.R. 1-89).

[107] ARRA, Division A, Title VIII, Training and Employment Services (H.R. 1- 59).

[108] This list comes from the Workforce Investment Act, section 171(e)(1)(b), which is cited in ARRA.

[109] U.S. Department of Labor, Education and Training Administration, Training and Employment Notice No. 30-08, March 9, 2009, available at http://wdr.doleta.gov/directives/attach/TEN/ten2008/TEN30-08acc.pdf.

[110] ARRA, Division A, Title XII, Community Planning and Development (H.R. 1-103).

[111] ARRA, Division A, Title IV, Energy Efficiency and Renewable Energy (H.R. 1-24).

[112] See the Department of Energy webpage on the block grants at http://apps1.eere.energy.gov/wip/block_grants.cfm.

[113] Energy Independence and Security Act of 2007, section 545 (b)(1)(A),(C).

[114] ARRA, Division A, Title XIII, Section 13301, Subsection 3012 (H.R. 1-134).

[115] A map of DHHS multi-state regions is available at http://www.hhs.gov/about/regionalmap.html.

[116] Information about the New York Primary Care Information Project is at http://www.nyc.gov/html/doh/html/pcip/pcip-summary.shtml. Information about the Massachusetts eHealth Collaborative is at http://www.maehc.org/.

[117] Personal communication with John Halamka, MD, MS, Chief Information Officer of the CareGroup Health System, Chief Information Officer and Dean for Technology at Harvard Medical School, Chairman of the New England Health Electronic Data Interchange Network (NEHEN), CEO of MA-SHARE (the Regional Health Information Organization), Chair of the US Healthcare Information Technology Standards Panel (HITSP), and a practicing Emergency Physician, March 2, 2009.

[118] Muro and others, "MetroPolicy," especially chapter 5. See, also, Atkinson and Wial, "Boosting Productivity, Innovation, and Growth through a National Innovation Foundation;" Mills and others, "Clusters and Competitiveness;" Brown and others, "Shrinking the Carbon Footprint of Metropolitan America"; Puentes, "Bridge to Somewhere;" Mead and Rotherham, "Changing the Game."

[119] Weekly Address of President Barack Obama to the Nation, February 14, 2009, available at http://www.whitehouse.gov/blog/09/02/14/A-major-milestone/.

[120] For the most part, this figure comprises funds for agency inspector generals to monitor spending for waste, fraud, and abuse. That aspect of ARRA is not discussed here. At the same time ARA allows federal agencies to reimburse state and local government grant recipients for the cost of accountability reporting. No specific sum is appropriated for these efforts.

[121] ARRA also requires certifications on state and local government websites regarding the uses of infrastructure funds.

[122] Office of Management and Budget, memorandum, "Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009," February 18, 2009, sections 2.1-2.8, pp 9-14.

[123] ARRA, Division A, Title XV, Subtitle B, Section 1526.

[124] See OMB Guidance section 2.12 p. 17: "The initiative is designed to create one portal where the public can find and analyze information and report potential fraud, waste and abuse pertaining to the Recovery Act. As such, www.recovery.gov is intended as the single, consolidated portal to that information. Multiple websites will confuse the public."

[125] ARRA, Division A, Title XV, Subtitle B, Section 1512.

[126] "A 40-Year Wish List," *The Wall Street Journal*, January 28, 2009. Available at http://online.wsj.com/article/SB123310466514522309.html.

SELECTED RESOURCES AND REFERENCES

Documents for the American Recovery and Reinvestment Act

White House Recovery website: **www.recovery.gov/**

Final Text of Legislation: **http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1enr.pdf**

Text of the Conference Report - Division A: **www.house.gov/billtext/hr1_legtext_cr.pdf**
Text of the Conference Report - Division B: **www.house.gov/billtext/hr1_legtext_crb.pdf**

Joint Explanatory Statement - Division A: **www.house.gov/billtext/hr1_cr_jes.pdf**
Joint Explanatory Statement - Division B: **www.house.gov/billtext/hr1_cr_jesb.pdf**

White House Office of Management and Budget Initial Guidance on Implementing ARRA:
www.recovery.gov/files/Initial%20Recovery%20Act%20Implementing%20Guidance.pdf

Select Federal Agency Recovery Websites

Department of Commerce: **www.commerce.gov/Recovery/**

Department of Defense: **www.defenselink.mil/recovery/**

Department of Education: **www.ed.gov/policy/gen/leg/recovery/index.html**

Department of Energy: **www.energy.gov/recovery/**

Department of Health and Human Services: **www.hhs.gov/recovery/**

Department of Labor: **www.dol.gov/recovery/**

Department of Transportation: **www.dot.gov/recovery/**

Environmental Protection Agency: **www.epa.gov/recovery/**

Housing and Urban Development: **www.hud.gov/recovery/**

Treasury Department: **www.treas.gov/recovery/**

Blueprint for American Prosperity

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Mills, Karen, Elisabeth Reynolds, and Andrew Reamer. 2008. "Clusters and Competitiveness: A New Federal Role for Stimulating Regional Economies." Washington: Brookings Institution. Available at **www.blueprintprosperity.org**

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Rotherham, Andrew, and Sara Mead. 2008. 'Changing the Game: A Federal Role in Supporting 21st Century Education Innovation." Washington: Brookings Institution. Available at **www.blueprintprosperity.org**

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