



INTERNATIONAL
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2009 FEDERAL ECONOMIC DEVELOPMENT AGENDA:

Policy Recommendations for the 44th President and 111th Congress

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Introduction

The 2009 Federal Economic Development Agenda is a set of policy recommendations issued by the International Economic Development Council (IEDC), a non-profit membership organization representing more than 4,600 economic developers and related academic and business organizations. IEDC is driven to help economic developers do their job more effectively. This Agenda is intended to provide national leaders with recommendations critical to the economic development of communities in the United States. It also offers a roadmap to the new presidential administration and the new Congress to strengthen the nation's innovation capacity. The Agenda was developed by IEDC's Public Policy Advisory Committee with input from IEDC staff, the External and Member Relations Committee, and the Board of Directors.

The IEDC Federal Economic Development Forum on March 15-17, 2009, will bring together federal policy makers and government leaders with economic development practitioners and thought leaders to address many issues found in the 2009 Federal Economic Development Agenda. For more information on the Federal Economic Development Forum, go to <http://www.iedconline.org/FederalForum/index.html>.

At the writing of the 2009 Federal Economic Development Agenda, the country is in the midst of an economic crisis. We are witnessing faltering home loans, failing banks, rapid job losses, business closures, volatile energy prices and falling stock prices that threaten the U.S.'s quality of life now and for the near future. Local and state governments are experiencing unprecedented pressures to meet growing community needs at a time of tax shortfalls. Reflecting global economic interdependence, financial systems around the world also are in turmoil as world markets experience the ripple effects from the United States' financial disruptions. Policies enacted by U.S. leadership not only affect the domestic economy but also impact international economies.

We focus here on innovation and economic development issues and recommendations for federal leaders. Innovation and economic development are about generating and implementing ideas and activities that enable broadly shared prosperity and improve the quality of life for all. Our purpose is to provide a comprehensive economic development and innovation strategy to nurture the long-term success and sustainability of the U.S. economy.



Now, more than ever, we need a renewed commitment to conserve and develop alternative energy resources; enhance globally competitive manufacturing; strengthen science and engineering education; retool the workforce; rebuild infrastructure and other physical assets; stimulate entrepreneurship; expand businesses; and combat distress. We also need an innovative government – one that is an effective steward of the economy and a proponent of economic opportunities for all communities. To revitalize the nation’s economy, we call on federal policy makers and government leaders to partner with state and local leaders, who are the frontline responders to economic challenges. Together, local and state economic developers and federal policy makers can effectively implement a new Economic Development Agenda.

The nation’s economic vitality, sustainability, and innovation capacity are intrinsically interwoven. Over the past couple of decades, rapidly expanding innovation spurred unprecedented economic growth. Innovation will be at the core of this country’s economic recovery. It is the basis for new and rejuvenated business growth, employment and global competitiveness. We have the opportunity to turn crisis into opportunity by creating green jobs, reinvigorating our manufacturing industry, rebuilding infrastructure, and making investments in innovation and the workforce that can make the economy stronger than before. Notably, while significant economic stimuli are currently needed to bolster the economy, the new administration should also seek long-term solutions to put the U.S. on a path towards balancing the federal budget.

We present discussions and recommendations in the following six areas.

- a) Ensuring a Competitive Workforce,
- b) Stimulating Entrepreneurship and Supporting Small Business,
- c) Developing and Conserving Energy Resources, and Growing a Green Economy,
- d) Promoting Technology and Innovation,
- e) Fostering Effective Finance and Governance, and
- f) Rebuilding Our Infrastructure.

These six areas encompass the critical issues facing local and state economic developers. Some essential development issues – such as improving communities, increasing capital access, and making our efforts more sustainable – cut across these six areas and are interwoven throughout the document. Moreover, the achievement of sustainable, broadly



shared prosperity emerges from the alignment of these multiple, interactive components between and across the layers of government.



Ensuring a Competitive Workforce

If the U.S. is to remain globally competitive, it must have a workforce that is entrepreneurial, innovative, problem-solving, and equipped with technical skills. A technically equipped and educated workforce is key to the nation's economic sustainability and global competitiveness. Nearly one-third of U.S. students do not graduate from high school, and some school districts graduate well below half of their students.

Once a leader in the number of university science and engineering graduates, the U.S. now significantly trails China.ⁱ In addition, because of national security issues, the U.S. is losing foreign engineering and science students who once supplied U.S. corporations with highly skilled labor and sometimes started U.S.-based businesses. These factors have profound, long-term implications and require immediate attention. Creating a competitive workforce involves strategies to strengthen the emerging workforce pipeline, to retool the incumbent workforce, and to access an international talent pool.

Strengthening the workforce pipeline includes increasing early education in science, technology, engineering, and mathematics (STEM), improving high-school completion rates, and producing greater numbers of technologists, scientists and engineers. Attention to K-12 education and increasing exposure of students to technology, math and science in their early education is essential. More students also must be encouraged to enter STEM fields as researchers, practitioners, and teachers. It is especially important to provide incentives that promote STEM among student populations that are traditionally underrepresented in these fields and to increase their participation in science and technology education and careers. The National Science Foundation (NSF), the National Institutes for Health (NIH) and several other federal agencies provide programs that encourage students to enter science and engineering professions.

Our colleges and universities also must produce more scientists, engineers, and technically trained graduates in order to keep pace with nations that now graduate greater numbers of scientists and engineers than the U.S. In addition, these institutions must expand their vision to encompass life-long learning, entrepreneurial education, and private-sector partnerships to re-educate and retool workers.



Retooling the incumbent workforce involves demand-driven responses that address emerging and changing industry needs. Communities and states are making great strides to strengthen their current workforce, supported in part by strong federal partnerships. For example, the Workforce Investment Act (WIA) supports broad structural reforms that strengthen partnerships between federal, state and local governments, and the private sector. Also important are efforts to better align existing funding and complementary programs. The Department of Labor's (DOL) Workforce Innovation in Regional Economic Development (WIRED) program fosters regional alignment of economic and workforce development initiatives. With escalating unemployment, strategies to retool and reskill our workforce are particularly urgent.

In addition, insuring access to an international talent pool allows U.S. companies to fill positions where we have shortages in critical occupations. Access to the international talent pool includes recruiting students for community college and university programs and retaining those students after graduation to fill critical occupations. It also helps employers of U.S.-owned and U.S.-based companies to transfer employees within their companies to fill positions.

In order to further strengthen excellence in education and workforce training to meet increasing demands, we recommend that the new administration work to bolster the existing workforce and emerging worker pipeline and to coordinate efforts with local and state economic developers and education providers. Coordinating education, workforce training, and economic development at all levels is essential to promoting cohesive and effective workforce development strategies. Economic developers play a significant role in working with businesses, community leaders, K-12 school systems, colleges and universities, and are well positioned to develop and implement comprehensive strategies and act as intermediaries that facilitate these linkages. To build a competitive workforce, we recommend actions to (a) strengthen the emerging workforce pipeline, (b) enhance the existing workforce, and (c) provide access to the international talent pool.

I. Strengthen the Emerging Workforce Pipeline

- Extend funding for federal initiatives that encourage early interest in STEM and career pathway awareness for students.



- Support the Department of Education's Career Technical Education at secondary and post-secondary education institutions, share best practices and provide technical assistance to educators to better prepare students for future career opportunities.
- Increase NSF fellowships to expand the pool of U.S. scientists and engineers, and to increase participation from underrepresented populations.

II. Enhance the Existing Workforce

- Commit to a base funding level and allow flexibility with WIA funding awarded to states to support responsiveness to regional and state needs, especially for incumbent training.
- Continue the High Growth Job Training, Community Based Job Training and WIRED programs, operated by the DOL, and strengthen them where possible.
- Ensure that appropriate workforce development measures accompany key legislative initiatives, such as climate change and energy independence, health care reform, and infrastructure modernization.
- Maximize incentives for local workforce providers to align funding and strategies with complementary initiatives such as the Manufacturing Extension Program, the Small Business Development Centers, the U.S. Department of Agriculture's rural development programs, the Economic Development Administration and others.

III. Provide Access to the International Talent Pool

- Improve the H-1B visa program to attract and retain skilled talent from abroad by significantly increasing the visa cap.
- Allow foreign students receiving graduate degrees in technical fields to qualify for permanent resident status.
- Enable more international students to obtain visas to study at U.S. colleges and universities, particularly in critical skill shortage areas.



Stimulating Entrepreneurship and Supporting Small Business Growth

The U.S. leads the world in entrepreneurship and small business development – it is one of this nation's core competitive advantages. Over the past couple of decades, entrepreneurs and young small firms (under five years) have been responsible for virtually all net job growth in the U.S. As large firms increasingly outsource and downsize, it is entrepreneurs and small firms that are employing U.S. citizens, making productivity gains, and innovating.

The federal government has several programs that serve entrepreneurs in some way, but many of the programs are spread across several agencies or do not focus solely on entrepreneurs. Some programs, such as the Small Business Innovation Research (SBIR) program and the Technology Innovation Program (TIP) include entrepreneurs as part of their small business mandate, but are not specifically geared to assist entrepreneurs. Other long-standing federal programs that serve small businesses generally, such as the Small Business Development Centers (SBDCs), often are not well equipped to address entrepreneurs' needs. Rural economic recovery programs sponsored by the U.S. Department of Agriculture (USDA) encourage general business development, but do not encourage entrepreneurship as part of this development. There is clearly a need for federal policy makers to recognize entrepreneurs as distinct from small businesses, and to devote programs as well as allow flexibility within existing programs to meet the specific needs of entrepreneurs while still meeting the needs of small businesses.

Many state and local governments actively support entrepreneurs and offer a wide range of programs specifically targeted to them. These programs include incubation, mentoring, and access to capital, especially angel and seed capital. There also is a need to coordinate entrepreneurial programs at all levels with related programs such as small business, workforce development, economic development, and rural and urban development.

Entrepreneurship education in colleges, universities, K-12 education systems, and other institutions also is important in encouraging and equipping future entrepreneurs. Although entrepreneurship education is becoming increasingly popular, it still is not considered mainstream and often is not offered outside of business schools or adequately integrated into science and engineering disciplines. Moreover, federal policy and programs do little to promote and support entrepreneurship on a broad scale.



Today, the most critical need facing entrepreneurs and small businesses is access to capital. Equity capital, particularly early-stage capital such as angel and seed capital, has been critical in stimulating start-ups that are essential to U.S. economic growth. Early-stage capital has become increasingly restricted as venture capital firms turn to lower-risk investments. Moreover, traditional sources of equity – family, friends and home equity – have been significantly reduced in response to this tightening credit market. While state governments have been very active in providing programs and incentives to fill a gap in early-stage capital, the federal government has lagged behind. In fact, the federal government's largest small business equity programs – the participating securities program of the Small Business Administration's (SBA) Small Business Investment Corporations (SBIC) programs – have been eliminated.

The federal government also historically has played a significant role providing access to debt capital and technical assistance to help small businesses expand and adapt to changes in the economy and policy environment. With greater demand for energy efficiency coupled with rising energy prices, tightening credit and a larger, more competitive global marketplace, small businesses need access to debt capital and technical assistance to help them adapt to new market conditions. That access has declined in both private and public markets. In the private market, banks and non-bank lenders are facing reduced liquidity and tightened credit standards while in the public sector, the U.S. SBA's 7a and 504 programs have declined almost 50 percent from FY07 levels. In these times, the capabilities of the SBA, especially its 504 and 7a loan programs, and its technical assistance through the Small Business Development Center (SBDC) network, are critical federal resources for solving current challenges and moving beyond them. In addition, Industrial Development Bonds (IDBs), which have provided significant finance for the expansion of manufacturing firms, can inject badly needed capital into the market, particularly if expanded. IDBs also can help strengthen our struggling manufacturing industry.

An increasingly problematic roadblock to small business development and growth is the cost of the health care system. Small businesses inherently endure economic risks, but that economic risk is heightened by burdensome health care costs. High premiums and inflexible insurance systems discourage individuals with health care needs from starting new businesses as they weigh staying with their current employers to keep their coverage against starting a business and purchasing new insurance with increasing premiums and possible complications.ⁱⁱ



Moreover, new businesses often cannot afford to cover insurance for employees, and as small businesses grow, owners must factor in burdensome health care costs when making decisions to add new employees.

We recommend several federal actions intended to (a) support budding entrepreneurs that are so critical to the nation's future economic growth, (b) expand entrepreneurship education, and (c) help existing small businesses grow and prosper.

I. Support Entrepreneurs

- Mandate and adequately fund entrepreneurship activities as part of programs in reauthorization bills for the SBA, USDA, Economic Development Administration, and the DOL's WIRED initiative. The creation of a new Rural Microenterprise Assistance Program in the 2008 Farm Bill is a step in the right direction; we need similar programs in traditionally underserved urban areas.
- Identify current programs in the federal government that in some way support entrepreneurs and assess (a) their effectiveness in meeting entrepreneurial needs, (b) coordination with other federal programs that include entrepreneurs, and (c) coordination and alignment with state and local programs.
- Institute federal tax credits to stimulate private angel and seed capital investments in start-up and early-stage businesses, and to reverse the negative impact of tightening loan markets on emerging businesses.
- Reinstate the equity provided by Small Business Investment Corporation (SBIC) program, operated by SBA. Incorporate additional safeguards that are equivalent, as appropriate, to the debenture SBIC program.

II. Expand Entrepreneurship Education

- Incorporate entrepreneurship education as part of the requirements in "No Child Left Behind" and through the Higher Education Act, and support all efforts to expose young people to entrepreneurship training at all levels: K-12, community colleges, four-year colleges, and beyond.



- Create an Office of Entrepreneurship Education in the U.S. Department of Education that will gather and disseminate best practices to educators and act as an advocate for entrepreneurship training efforts.

III. Help Small Businesses Grow and Prosper

- To expand available small business credit, support expansion of the SBA 504 and 7a loan programs by reducing costs, removing restrictive policies, and taking proactive steps to unlock the secondary market for SBA-related loans.
- To reduce the cost of capital for small businesses, provide a short-term subsidy for debentures for the SBA 504 and SBIC programs.
- Expand the number of SBA lenders by allowing non-traditional financial institutions such as Community Development Financial Institutions and Certified Development Companies to offer SBA 7a programs to increase small business access to capital.
- Undertake a comprehensive review of the SBA and its programs to ensure that the agency's policies, procedures and programs meet the changing needs of small business. Special attention should be paid to SBA loan and SBDC programs that need to be updated to better address entrepreneurial and technology start-up needs.
- Modernize IDB authorizing legislation to qualify small issue bonds to include new economy industries, and increase maximum bond size limitation to expand the program's ability to increase capital availability.
- Provide assistance through programs such as Manufacturing Extension Partnership (MEP) and SBDC to help small businesses employ greater energy efficiencies and identify and take advantage of new opportunities in changing markets, particularly the emerging market for clean energy and greater energy efficiencies.
- Institute health care reforms to lower the economic burden on small businesses and encourage the creation of new businesses.



Developing and Conserving Energy Resources, and Growing a Green Economy

The current energy crisis is having a profound effect on the pillars of economic development – new business attraction, retention and growth – and more generally, on efforts to improve the quality of life in our communities. We, as economic developers, must heed the challenges and opportunities of new energy realities and climate change more broadly. There is no single solution to these challenges. No one form of energy generation or conservation will be sufficient to solve the crisis. We must collectively pursue multiple solutions and seize emerging opportunities for our communities.

Currently, the U.S. relies heavily on fossil fuels including oil, coal, and natural gas. In 2007, fossil fuels provided 87 percent of the energy used in the U.S.ⁱⁱⁱ In the short term, the conventional means of producing oil will continue and expand as new off-shore locations are leased and new technologies facilitate more efficient petroleum extraction from shale, sand, and other sources. Coal, which produces about half of the electricity generated in the U.S., also will play an important role in providing new energy resources.^{iv} At the same time, we must continue our efforts to reduce the environmental impact from the use of fossil fuels. We must find new methods of extraction, processing, scrubbing, and sequestration, in order to reduce carbon emissions. In addition to improvements in fossil fuel production, we must aggressively seek expansion of renewable energy sources such as solar, wind, hydro, geo-thermal, ocean wave, bio fuels, and nuclear. There also must be improvement in our ability to store and transmit energy from its source to its destination in ways that are both efficient and environmentally sensitive.

While we strive to develop a wider array of energy sources, we must also find better ways to conserve energy. For example, commercial and residential buildings contribute significant carbon emissions that could be reduced through new energy-conserving building standards and better energy management. Local and state governments also play a major role in mandating building standards and encouraging improved energy management. Some localities have already developed tax credits and other financial incentives to encourage energy-efficient construction. New energy management techniques, aided by new wireless technology that facilitates relatively inexpensive retrofit for older buildings, also are now more available and offer quick payback for their investment.



The expansion of renewable energy and improved energy efficiency provides fertile ground for the development of new businesses, industries, and jobs. Renewable energy and energy-efficient technologies represent important economic opportunities for growth, strengthening manufacturing and developing a global competitive advantage while reducing greenhouse gases. Many states and localities have started to find ways to harness these opportunities, but a federal role is still required. The Energy Block Grant for Infrastructure and Green Jobs is a promising start in this direction.

Increased energy costs are changing the economic factors that influence business decisions. For example, large increases in transportation costs are causing many U.S. companies that produce goods abroad to consider returning their manufacturing operations to the U.S. in order to be closer to end consumers. Market demand also will spur the development of more energy-efficient vehicles and other more efficient modes of transportation, including mass transit and inter-modal networks. We must ensure that the U.S. seizes these emerging economic opportunities, particularly by ensuring that there is capital available to enable entrepreneurs and businesses to do so.

To turn the energy challenge into an economic opportunity, the new administration and new Congress should exercise leadership in five areas: (a) encourage the development of renewable energy and energy-efficient technologies and industries, (b) create a domestic market for clean technology products, (c) provide information to encourage energy conservation, (d) leverage opportunities for new business development and job creation, and (e) ensure a skilled workforce in energy and related industries.

I. Encourage the Development of Renewable Energy and Energy-Efficient Technologies and Industries

- Protect, expand and extend the renewable energy investment and production tax credits to support development of renewable energy resources, especially solar and wind power, and new technology for energy storage and transmission.
- Increase investment in energy research and development to provide sustainable and affordable clean energy, create new businesses and new jobs.
- Invest in clean coal and other emerging technologies to reduce the environmental impact while benefiting from domestic energy resources.



II. Create a Domestic Market for Clean Technology Products

- Phase in national standards to encourage more energy-efficient products and buildings.
- Provide federal assistance to small businesses to reduce their upfront costs resulting from implementing new energy conservation guidelines. Federal assistance might be in the form of low-interest loans or tax deductions/credits.
- Continue to increase fuel economy standards and expand tax credits for individuals and corporations that purchase alternative fuel vehicles produced in the U.S.
- Promote federal policies and procurement practices that encourage the use of efficient, clean and renewable energy technologies.
- Create market-based compliance mechanisms, such as a cap and trade vehicle, to reduce carbon emissions while creating economic opportunity.

III. Provide Information to Encourage Energy Conservation

- Develop new metrics to facilitate the true comparative costs and benefits of different energy options.
- Provide information to U.S. businesses, state and local governments, and the public to facilitate more informed energy-related decisions.

IV. Leverage Opportunities for New Business Development and Job Creation

- Preserve and expand the Energy Block Grant for Infrastructure and Green Jobs to provide communities resources for energy efficiency and renewable energy projects.
- Allocate funding in SBA programs, MEP, and other programs to help manufacturers and other small businesses identify opportunities to use energy efficiency and green technologies as a competitive advantage and to develop new products, new markets and new supply chains to grow existing businesses.
- Support the growth of industries that develop energy-efficient vehicles and other energy-efficient modes of transportation, such as mass transit.
- Incentivize U.S. manufacturers to return their operations to the U.S. in order to be closer to their customers, thus reducing their transportation costs.



- Ensure capital availability for energy-saving investments through SBA and other government-guaranteed lending.

V. Ensure a Skilled Workforce in Energy and Related Industries

- Fund workforce programs to train and retrain workers in energy-related fields.
- Invest in green jobs, from research and development and production to building renovation and construction.



Promoting Technology and Innovation

U.S. innovation has been at the core of the nation's economic progress. Over the past couple of decades, innovation led the way to the U.S. economic prosperity enjoyed by all citizens and it will again lead the way to new economic prosperity. While technology and innovation remain the nation's strength, there is growing concern about the state of U.S. innovation and its competitive position in a global economy.

Innovation is based on research and development (R&D). Although the U.S. remains the leader in R&D spending with nearly \$370 billion in total expenditures,^v Asian countries are dramatically increasing their R&D expenditures and now threaten U.S. leadership in several critical technology areas such as energy. In 2007, the federal government spent \$38.6 billion in R&D, but unlike competing countries, a significant portion of that funding was devoted to the military, with little direct impact on U.S. industrial competitiveness. Federal R&D tax credits have been effective in stimulating corporate R&D, but tax credit rates are now falling behind those of competitive nations.

The lack of congressional action on most 2009 federal R&D budgets has left agencies at or below 2008 levels, and previously endorsed increases to meet the goals of the America Competes Act have never been fully funded. Moreover, as the economic crisis looms, R&D funding by the federal government and industry increasingly may be sacrificed, which could further weaken the U.S.'s competitive position.

Universities are some of this nation's greatest innovation and economic assets. Academic institutions represent a growing economic resource as they partner with industries and spin off new enterprises to commercialize R&D. The 1980 Bayh-Dole Act allows universities to own the rights to innovations developed by federal funding and is credited with increasing university technology transfer, resulting in more than 5,000 startups and 260,000 jobs.^{vi} While universities increasingly license innovations, a more recent concern is that academia's increasing focus on intellectual property could stifle more productive collaborations that may result from more flexible private-sector relationships.^{vii}

University-industry collaboration is an important economic tool, and programs that encourage collaboration add significant value to federally funded research. There are several federal



programs designed to encourage industry-university collaboration, including NSF's Industry-University Cooperative Research Centers program (I/UCRC) and Partnerships for Innovation (PFI). These programs effectively leverage public-private partnerships, but are limited because of modest government funding.

Federal laboratories also are rich sources of innovations. A recent analysis of the R&D 100 Awards shows that more than one-third of the awards stem from federal laboratories.^{viii}

Partnerships between industries and federal laboratories have produced some of the key innovations in modern history, including the Internet. While federal laboratories encourage collaborative research and commercial relationships (particularly contract-operated DOE laboratories), working with federal laboratories remains cumbersome and sometimes problematic, especially for small firms. In addition, federal laboratories devote an insignificant amount of their resources to economic development, and only a few require economic development to be part of their laboratory's mission.^{ix}

The U.S. manufacturing sector is another essential component of the nation's innovation economy, and is more threatened by global competition than any other sector. The MEP, administered by National Institute of Standards and Technology (NIST), provides technical assistance to enhance the competitive position of U.S. manufacturers. Despite its success, the program was regularly targeted for funding reductions or elimination over the last eight years. Improving manufacturing and keeping manufacturing jobs in the U.S. is essential to the nation's economic recovery.

The Small Business Innovation Research (SBIR) program, offered through 11 federal agencies, also is critical in stimulating the development and commercialization of innovations by start-ups and small businesses. Its companion Small Business Technology Transfer (STTR) program encourages innovation through partnerships with non-profit research organizations, mainly universities. These programs not only support the development of mission-driven innovations but also are intended to encourage the application of SBIR/STTR innovations for commercial use. While Congress increasingly has emphasized the programs' commercialization aspect, it has done little to add the flexibility and broader support needed for commercialization. The NIST Technology Innovation Program (TIP) also provides small businesses with funding to accelerate high-risk innovations and is a valuable but currently limited program.



States and communities have developed broad-based “infrastructure” to support start-ups from universities, federal laboratories, and private-sector innovation sources. Incubators and research parks built around universities and federal laboratories, many supported through Economic Development Administration (EDA) funding, provide important infrastructure. Seed and venture capital programs also are key to supporting startups and innovation-related businesses. As we noted in our discussion on entrepreneurship, often federal government policies and programs have lagged behind state programs, and federal stimulus may be needed now more than ever as states and communities increasingly face eroding economic bases.

The U.S. is the only industrialized nation that does not have a federal office charged with strategic innovation development and oversight. There are numerous federal programs that address innovation, but they are spread across several agencies and lack coordination and cohesiveness. There is no federal entity that has the main responsibility to develop and implement innovation strategies, and collect and analyze data, trends, best practices and key issues. In addition, practitioners and policy makers lack the metrics needed to accurately assess the value of innovation policies and practices, essential in making sound policy and program decisions.

In order to enhance and leverage innovation as a key component of U.S. economic recovery, we make several recommendations to (a) incentivize R&D and commercialization, (b) catalyze innovation partnerships, and (c) strengthen federal innovation programs.

I. Incentivize R&D and Commercialization

- Expand and make permanent the federal R&D tax credit. Allow workforce training expenses to qualify as a “knowledge credit” under the federal R&D tax credit.
- Review the Bayh-Dole Act to ensure that its original intent is being met and that it optimally promotes university-industry R&D and commercial collaboration.

II. Catalyze Public-Private Innovation Partnerships

- Catalyze industry-university research partnerships by instituting federal research grants and incorporating incentives in current agency programs.



- Expand NSF's I/UCRC program and at least double the PFI program.
- Encourage regional R&D partnerships across state borders by providing award incentives through federal competitive innovation programs.

III. Strengthen Federal Innovation Programs

- Create a National Innovation Foundation or other national entity to coordinate innovation programs such as that proposed by the National Innovation and Job Creation Act of 2009 (S. 3078).
- Develop metrics that reflect the true and full value of innovation investments and improve data collection on federal, state and local innovation investments.
- Reauthorize the SBIR/STTR program and implement greater flexibility within the programs to increase commercialization services.
- Authorize the Federal and State Technology Partnership Program designed to support state and local SBIR/STTR efforts.
- Reauthorize and double funding for MEP; encourage MEP to intensify its focus on supporting sustainability initiatives and pulling innovative technologies from universities, federal laboratories and other research institutions for adoption by manufacturing firms.
- Make permanent and fully fund TIP (administered by NIST).
- Mandate economic development as part of federal laboratory missions and set aside a small percentage of federal laboratories' funding for this purpose.
- Organize working groups within major research agencies that involve small businesses, corporations, venture capitalists, and academicians to provide input on policies and practices that will improve public-private partnerships in federal laboratories.
- Identify current state and local technology programs and best practices for potential replication at a national level.



Fostering Effective Public Finance and Governance

The federal government's most enduring and most influential role in economic development has been to improve the quality of places by building physical assets and directly combatting distress. For the federal government to effectively foster economic development, it must have well designed programs that adapt to changing market conditions, and financial resources and political commitment to meet the programs' needs and objectives. It also must encourage the alignment of programs across federal agencies and among layers of government.

While states and communities are uniquely positioned to address economic development issues, they require federal support. This is particularly true of distressed areas and areas recovering from community-altering events, such as natural disasters, military base closures or significant economic transitions. These areas are the most in need of assistance and the least able to pay for that assistance. In these areas, the federal government is playing a diminished role in economic development relative to states and communities, with negative consequences for the competitiveness of distressed places.

Strengthening local economic development strengthens the nation. Programs that have provided viable solutions to resolving distress and improving places should remain a federal priority. Some of these programs and initiatives are (a) the Community Development Financial Institutions (CDFI) Fund programs, (b) Federal Emergency Management Agency programs, (c) the Environmental Protection Agency's Brownfields programs, (d) Executive Orders 12072 and 130006, (e) the Base Realignment and Closure program and (f) the Urban Development Action Grant (UDAG).

The CDFI fund in the Department of Treasury provides funds to community development financial institutions and awards tax credits to enable financing for community development goals. Since its inception, it has awarded \$864 million that has leveraged \$16 billion of private investment for economic revitalization and extending financial services to low-income neighborhoods. One of the fund's newer programs, the New Markets Tax Credit (NMTC), has proven to be a very effective, flexible tool for leveraging significant private investment for large-scale projects in low-income rural and urban communities. Private investors receive a tax credit for providing capital to certified community development entities that invest in the communities. These tax credits combine well with other tax credits (such as historic and solar investment) and



tax increment financing to create significant financial packages that positively impact distressed areas. According to an IEDC survey of Community Development Entities (CDEs) and Qualified Active Low-Income Community Businesses (QALICBs), reauthorization of the NMTC program on a long-term or permanent basis would lead to an increase in investors and projects critical for revitalization.^x

In times of disaster, communities rely on the Federal Emergency Management Agency (FEMA) and other federal agencies to help them provide critical services and assist businesses.^{xi} The Stafford Act, which sets regulations that govern FEMA's responses to natural and man-made disasters, has proven inadequate to facilitate the federal government's rapid response to meet community needs in recent disasters. FEMA is not flexible enough to meet the varying levels of assistance required by different types of disaster, and cannot accommodate the multi-year funding needs of impacted communities.

The Brownfields program, administered by the Environment Protection Agency (EPA), supports environmental remediation that helps regions reuse property and revitalize their economic bases. Federal investments in the Brownfields program have yielded 10 times the economic return, making this program a proven economic stimulus tool.^{xii} While the program has provided essential cleanup and redevelopment funding, the Cleanup Grant's current cap of \$200,000 per site is far less than the average needed. According to a Northeast-Midwest Institute evaluation, the average cost of cleanup, per site, is \$602,000.^{xiii}

Executive Order 12072: Federal Space Management has been a positive example of federal involvement in urban development, directing federal agencies to locate their facilities in urban centers as anchors for neighborhood economic stabilization. Executive Order 13006: Locating Federal Facilities on Historic Properties in Our Nation's Central Cities reaffirms the earlier executive order and additionally encourages historic preservation by directing federal facilities to locate in historic buildings within urban cores. However, previous administrations have not consistently carried out these executive orders that are intended to help combat urban distress.

The Base Realignment and Closure (BRAC) program in the U.S. Department of Defense (DoD) ensures the effective closure and realignment of military bases. Since 1988, 387 locations have been selected for realignment or closure. The 2005 BRAC accounts are the latest round of realignment and closures and are planned for completion by 2011. Moving forward, it is



important that the timetables developed to meet the 2011 completion date are met. Otherwise, communities' redevelopment investments, which are made in anticipation of the base closure or realignment, may be disrupted or go unused, causing additional hardship. While the closure and realignment process has generally worked well, BRAC did not receive full funding in the FY 2009 defense appropriations, which may cause future problems. The technical assistance provided by DoD's Office of Economic Adjustment (OEA) also has been indispensable in helping hundreds of communities respond to base closures and realignments.

From 1977 until 1989, the HUD-administered Urban Development Action Grant (UDAG) provided competitive grants for substantial development projects that leveraged significant private financing, were based on sound planning and guaranteed job creation for low-income residents. During its eleven-year lifespan, UDAG leveraged five private dollars for every public dollar invested, resulting in a total \$5 billion for revitalization. A recent summit of urban development pioneers cited the exceptional success and indispensable value of the program.^{xiv} They agreed that UDAG's elimination was a significant void in the economic developer's toolbox, particularly for combating urban distress.

In the past decade, states and communities have broadened their economic development focus from physical infrastructure and business attraction to include strengthening innovation, entrepreneurship, and talent. State and local economic development leaders have increasingly focused on seed and venture capital, entrepreneurship, business services, technology transfer, commercialization, energy and other innovation-related initiatives. In some cases, federal policy makers and program administrators have not kept pace with emerging economic development trends and opportunities. Federal policy makers need to assess whether some long-standing programs are effectively addressing current economic development needs. These programs include those related to (a) EDA, (b) the Community Development Block Grant, (c) the Community Reinvestment Act, and (d) USDA Rural Development.

EDA is an important tool in the nation's economic recovery and is uniquely positioned to address economic development problems and opportunities at state and local levels. Since FY 2004, EDA has awarded \$1.29 billion in grants, bringing to fruition valuable economic development projects, from new buildings for community colleges to infrastructure revitalization. EDA has been an exceptionally effective program; for every taxpayer dollar invested since FY 2004, it has leveraged an average of \$33 in private investment.^{xv} Despite EDA's vital role in



economic development, it has faced attempted budget cuts year after year. Moreover, the President's FY 2009 budget request has proposed a 52 percent reduction.^{xvi}

For nearly 30 years, distressed communities have depended on the Community Development Block Grant (CDBG) program, funded by the U.S. Department of Housing and Urban Development (HUD). Communities and states have leveraged CDBG funds to attract private investment and provide housing that otherwise would not have been available for distressed areas.^{xvii} Despite the critical importance of CDBG for economic development, the program is frequently targeted for budget cuts, and in recent years has been under consistent threat of elimination. While CDBG has struggled with some poor management practices in the past, it is an indispensable program for distressed areas.

The Community Reinvestment Act (CRA) encourages financial institutions to responsibly meet the credit needs of all communities, including those with low-income residents. The CRA is instrumental in providing greater opportunities particularly to communities with minority populations, and in curtailing discriminatory practices. The CRA allows low-income communities to receive a standard level of financial services that is essential for economic revitalization. More than \$1 trillion has been invested as a result of the CRA.^{xviii} In this increasingly constricted economy, the CRA may need some adjustments to meet current economic challenges, but it should not be diminished in any way.

USDA Rural Development programs are indispensable to rural communities. Since 2001, these programs have provided more than \$110 billion to strengthen the economic base of U.S. rural regions.^{xix} Some of these programs, however, were designed to address economic situations that no longer exist or are rapidly changing, such as depopulation, a higher percentage of foreign immigrants, and a declining agriculture sector.

There are many federal programs that address economic development needs. These programs are housed in multiple agencies, suggesting that some coordination would lead to greater efficiencies. In addition, federal policy makers and administrators are often unaware of state and local programs that provide similar and complementary services to those administered by the federal government. This lack of coordination, among federal agencies and among federal, state and local agencies, creates inefficiencies at all government levels.



Federal government programs have been structured to align with city, county and state government boundaries. These boundaries have become less important as innovation clusters, supply chains, labor sheds, and other economic factors increasingly define economic development regions. Federal, state, and local government policies have not kept pace with these fluid boundaries; nor has the data provided by the federal government. Budget cutbacks have forced the Bureau of Economic Analysis (BEA) and the Bureau of Labor Statistics (BLS) to plan to reduce regional data services – a critical resource for regional planning, targeting investments, and making the best use of limited resources.

National boundaries also have become less relevant for industry clusters, talent, attracting investment and expanding trade and commerce. While the federal government has taken some steps to address changing borders, government policies have lagged behind new economic realities. In particular, U.S. government actions to support international trade agreements that promote free and fair trade and expand foreign direct investment remain necessary to rebuild our economic strength.

To foster effective public finance and good governance, we provide recommendations in four areas: (a) reasserting the federal role in economic development, particularly its role in addressing economic distress and improving places; (b) revising federal policies and programs to reflect new economic realities; (c) coordinating and aligning economic development programs; and (d) keeping pace with regional and global economic changes.

I. Reassert the Federal Role in Economic Development and Improving Places

- Increase the NMTC allocation by \$1.5 billion to \$5 billion for the fiscal year 2009 budget and extend the NMTC through 2014 with annual adjustments for inflation. Update the program as appropriate based on stakeholder feedback.
- Allocate \$1 billion of the Troubled Asset Relief Program (TARP) to the CDFI fund to ensure credit and financial services to low- and moderate-income neighborhoods.
- Revise the Stafford Act to give FEMA a broader, more flexible authority in helping communities and states deal with natural and man-made disasters.
- Reauthorize the EPA Brownfields program; increase the funding and raise the cap for the Brownfields Cleanup grant program to more realistically reflect true cleanup costs.



- Reaffirm executive orders 12072 and 13006 as part of a larger federal plan to reengage in distressed urban areas.
- Continue to ensure that the BRAC accounts and the OEA are funded fully and in a timely manner.
- Restore the UDAG program and update it to meet current economic conditions.

II. Revise Federal Policies and Programs to Reflect New Economic Realities

- Support reauthorization and fully fund EDA. Review EDA programs to insure that they are effectively addressing rapidly changing economic conditions and hardships in states and communities, and revise accordingly.
- Continue strong support for CDBG. Review CDBG, identify and implement reforms that strengthen it to meet current economic challenges.
- Continue federal commitment to the CRA and ensure that the program upholds its original intent to encourage non-discriminatory financial practices while meeting changing economic circumstances.
- Review and ensure that rural development programs administered by USDA address changing demographics, industry shifts, and other economic challenges and opportunities.

III. Coordinate and Align Economic Development Programs

- Appoint a Special Assistant to the President for National Economic Development to lead the effort to identify, evaluate and make recommendations regarding economic development programs, and to coordinate and align programs and initiatives.
- Identify economic development, small business, innovation and related programs at the state and local levels that serve similar purposes as federal programs, and assess ways for federal programs to add value to the state and local programs.
- Organize ongoing committees in major federal agencies that bring together representatives from federal, state and local programs that serve similar purposes to exchange information and ensure alignment.
- Collect data and best practices on state and local programs and disseminate the information at the federal level.



IV. Keep Pace with Regional and Global Economic Changes

- Encourage federal agencies to promote regional programs within and across state borders by providing incentives and technical assistance through competitive federal awards.
- Restore funding to enable BEA and BLS to provide complete, accurate and reliable regional economic data.
- Support the expansion of international trade and expand the Invest in America program to create new economic development opportunities.



Rebuilding Our Infrastructure

A sound infrastructure is essential for economic growth and supports global competitiveness. It is also a proven job-creation engine and a critical component for improving the quality of place. The U.S. infrastructure is in critical need of substantial and immediate investment. After creating the world's best infrastructure system – from building the Eisenhower highway system to the information superhighway – the lack of attention to maintaining our infrastructure is undermining the nation's competitive position and capacity for growth. According to the American Society of Civil Engineers, the current condition of the nation's infrastructure earns a "D+". Diverse organizations ranging from the U.S. Chamber of Commerce to Building America's Future, a coalition of local and state leaders, are calling for urgent action.

We are experiencing increasing demand on ailing and outdated infrastructure as public expenditures lag in roads and highways, mass-transit systems, waterways, ports, bridges, water resources and conveyance, energy transmission, and other areas critical to the nation's business, commerce and quality of life. In recent years we have witnessed the collapse of bridges and levies with profound consequences to human and economic health. The Federal Highway Administration estimates that over one-fourth of the nation's bridges are structurally deficient or functionally obsolete, and one-third of urban and rural roads are in poor, mediocre, or fair condition.

Over the past 20 years, the federal share of total spending on the nation's non-defense infrastructure has steadily declined, placing a heavier burden on state and local governments. States and communities now spend three out of every four dollars expended by the public sector on infrastructure. Based on publicly available data, IEDC estimates that the public sector will need to spend more than \$200 billion annually for two decades to maintain the current infrastructure and keep pace with growing demand.^{xx} Reinvigorating and updating our infrastructure promises multiple economic benefits, including job creation in the face of spiraling unemployment; increased sustainability both environmentally and in response to natural disasters; enhanced cost efficiencies through better decision-making criteria; and strengthened community and national competitiveness.

A competitive infrastructure also must ensure that all regions have sufficient, high-speed access to the Internet. Once a leader in broadband access, the U.S. now ranks 15th among developed



nations. The rapid evolution of information infrastructure is reducing costs and making economic access more feasible for all regions. Congress has taken a step in the right direction with the Broadband Data Improvement Act (S. 1492), which requires the Federal Communications Commission (FCC) and American Community Survey to collect information on broadband access. We call on the U.S. Congress to appropriate additional funds for infrastructure and to enact legislation that will (a) invest in infrastructure networks, (b) incorporate new and innovative technologies, (c) emphasize sustainable approaches and (d) improve decision-making processes for investments.

I. Invest in Infrastructure Networks

- Establish a comprehensive infrastructure strategy and national vision tied to economic, social and environmental progress.
- Create an independent national infrastructure bank, as proposed in S. 1926, to implement a national infrastructure vision and support regional economic development and greater sustainability.
- Encourage stronger public-private partnerships that leverage greater private-sector participation in infrastructure investments.
- Extend wireless spectrum for broadband services to ensure all regions, especially underserved urban and rural regions, have access to high-speed Internet service.
- Support a new infrastructure initiative that seamlessly integrates alternative energy generation sources with the traditional energy transmission grid.

II. Incorporate New and Innovative Technologies

- Demand that federally funded projects use the latest planning and construction technology in order to reduce costs and improve environmental impacts.
- Promote new business innovation and management techniques in construction and planning.

III. Emphasize Sustainable Approaches

- Structure investments to maximize long-term return and sustainability, such as using life cycle cost analysis.



- Incentivize the coordination of land-use and transportation planning and reward smart growth strategies. California Senate Bill 375, designed to reduce sprawl, is a potential model for federal action.
- Invest in mass-transit systems that ensure mobility of talent within regions and reduce congestion and carbon emissions.

IV. Improve Decision-Making Processes

- Base infrastructure appropriations on empirical data in order to ensure a uniform and fair allocation process.
- Provide spending levels and allocations in a timely manner so that state and local capital improvement plans can align with federal allocations.
- To ensure efficiency and effectiveness, allocate realistic project funding, enforce strict budget and deadline accountability, and increase public transparency in the process.

Next Steps

As our nation faces an economic crisis on a scale not seen in most of our lifetimes, IEDC's members are committed to contributing their knowledge to revitalize the nation's economy. The recommendations set forth in the 2009 Federal Economic Development Agenda are a small start toward that goal. We call on congressional leaders and the new administration to meet and work with IEDC members toward a brighter economic future.



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Endnotes

ⁱ Associated Press. 2008, "High School Graduation Rates Plummet Below 50 Percent in Some U.S. Cities," FOXNews.com, April 1, 2008, <http://www.foxnews.com/story/0,2933,344190,00.html>.

ⁱⁱ Ewing Marion Kauffman Foundation. "On the Road to an Entrepreneurial Economy: A Research and Policy Guide, Version 2.0," July 2007 (www.kauffman.org)

ⁱⁱⁱ Energy Information Administration, "Annual Energy Outlook with Projections to 2030," <http://www.eia.doe.gov/oiaf/aeo/issues.html>

^{iv} *ibid.*

^v Borush, Mark, 2008, "New Estimates of National Research and Development Expenditures Show 5.8% Growth in 2007," National Science Foundation, <http://www.nsf.gov/statistics/infbrief/nsf08317/>

^{vi} Pradhan, Arundeeep, "Statement before the U.S. Congress, House of Representatives Committee on Science, Commerce, and Technology Subcommittee on Technology and Innovation" (statement presented before U.S Congress July 17, 2007) http://www.autm.net/aboutTT/Pradhan_Pt1and2.pdf

^{vii} Palmintera, Diane. "Technology Transfer and Commercialization Partnerships," Reston, VA: Innovation Associates, 2007. (www.innovationassociates.us).

^{viii} Fred Block and Matthew R. Keller, "Where do Innovations Come From?: Transformations in the U.S. National Innovation System, 1970-2006" The Information Technology & Innovation Foundation, July 2008 (www.itif.org)

^{ix} Palmintera, Diane. "Partners on a Mission: Federal Laboratories Contributing to Economic Development," Washington, D.C.: U.S. Department of Commerce, 2003. (www.InnovationAssociates.us)

^x International Economic Development Council. "IEDC New Markets Tax Credit Reauthorization Survey," February 2008

^{xi} Mitchell Moss and Charles Shelhamer, "The Stafford Act: Priorities for Reform", The Center for Catastrophe Preparedness and Response at New York University. October 2007

^{xii} Northeast-Midwest Institute, "A Proposal to Increase Cleanup Grants for Brownfields Redevelopment," March 2008.

^{xiii} *Ibid.*-

^{xiv} The American Assembly, "Retooling for Growth: Building a 21st Century Economy in America," http://www.americanassembly.org/programs.dir/prog_display_ind_pg.php?this_filename_prefix=WEAKMKTS&this_ind_prog_pg_filename=descr, Nov. 2007.

^{xv} Erulkar, Benjamin, "Statement by Benjamin Erulkar Deputy Assistant Secretary of Commerce for Economic Development and EDA Chief Operating Officer U.S. Senate, Committee on Environment and Public Works" (statement presented before U.S. Senate September 9, 2008)



http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs2008/edastatementforepw9908finalv2_2epdf/v1/edastatementforepw9908finalv2.pdf

^{xvi} International Economic Development Council “IEDC Federal Review,” April 2008

^{xvii} Schooley, Tom, “Communities brace for cuts,” *Pittsburgh Business Times*, February 8, 2005, <http://pittsburgh.bizjournals.com/pittsburgh/stories/2005/02/21/story1.html?page=2>

^{xviii} National Community Reinvestment Coalition “Community Reinvestment Act,” PolicyLink, <http://www.policylink.org/EDTK/CRA/action.html>

^{xix} United States Department of Agriculture, “Rural Development Dollars Obligated and Number of Loans and Grants Made FY2001-2008,”

<http://www.rurdev.usda.gov/rd/pubs/RD%20Obligations%202001%20-%202008.pdf>

^{xx} IEDC Public Policy Advisory Committee, Infrastructure Working Group, “IEDC Infrastructure Policy Paper 2009: Executive Summary,” September 2008. (Available upon request.)