**President Obama's Plan to Win the Future by Investing in
Advanced Manufacturing Technologies**

The President recognizes that manufacturing is critical to America's long-term economic competitiveness and our ability to win the future. It is not enough to invent new technologies in America; we must also invest in the ability to manufacture those technologies in America. President Obama proposes to support both the development and commercial deployment of advanced manufacturing technologies. These technologies can both revitalize existing manufacturing industries and support the development of new products in emerging industries like clean energy.

- **Launching breakthrough R&D in advanced manufacturing technologies:** The President's Budget proposes increased funding for the National Science Foundation (NSF), the National Institute of Science Technology (NIST), the Department of Energy (DOE) and Defense Advanced Research Projects Agency (DARPA) to support innovation in advanced manufacturing technologies.

- **Re-authorizing the Clean Energy Manufacturing Tax Credit for $5 billion:** The President proposes a re-authorization of $5 billion for the over-subscribed and successful $2.3 billion credit in the Recovery Act, to spur investment in manufacturing capacity for the clean energy technologies of the future.

- **Developing partnerships with industry to enhance advanced manufacturing R&D investments:** Commerce's NIST will launch the Advanced Manufacturing Technology Consortia program (AMTech), a public-private partnership designed to support advanced manufacturing R&D and dramatically reduce the time required for end-to-end innovation.

The President's Initiatives to Spur Investment in Advanced Manufacturing

The President's Budget will support continued investment in manufacturing innovation while supporting the commercial deployment of advanced manufacturing technologies into the U.S. manufacturing sector, strengthening American manufacturing and creating new, well-paying jobs:

- **Launching breakthrough competitive R&D for advanced manufacturing technologies**: Increased investments in NSF, DARPA, NIST and DOE's Office of Energy Efficiency and Renewable Energy will support U.S. leadership in developing advanced manufacturing technologies to help re-invigorate existing manufacturing industries while supporting the growth and development of new industries here in the U.S.

    o NSF will provide an increase of $87 million in basic and applied research funding to support advanced manufacturing in promising areas such as "materials by

design," nano-manufacturing, next-generation robotics, and cyber-physical systems like smart buildings and bridges.

o DARPA is investing $1 billion in advanced manufacturing over five years to fundamentally change the way we build things and dramatically reduce the time from design to production. For example, the "Adaptive Vehicle Make" program is focused on the manufacturing of complex defense systems, seeking breakthroughs like those that gave rise to the innovation and speed that characterizes microelectronics and information technology, with the goal of reducing the time to field by a factor of five.

o The Budget also includes over $763 million for NIST laboratories to accelerate the development of measurements and related technological advances, in areas including nano-manufacturing, network security, and bio-manufacturing.

o The Budget provides more than $500 million for DOE to support R&D for advanced manufacturing technologies related to energy, such as flexible electronics for components like batteries and solar cells, low-carbon biosynthesis of industrial chemicals, and cost-effective ultra-light, ultra-durable materials for automobiles.

o In addition, the Budget established a new $3 billion Wireless Innovation (WIN) Fund that will help spur the development of new wireless technologies. Funding in the NSF, DARPA, NIST, and other agencies will support applied research that will help advance and enable communications technologies and applications of the future.

- **Re-authorizing the successful Clean Energy Manufacturing Tax Credit (Section 48C) to support manufacturing investment**: The initial $2.3 billion Recovery Act credit was oversubscribed by a ratio of more than three to one, reflecting a deep pipeline of high-quality clean energy manufacturing opportunities in the U.S. Re-authorizing this program for $5 billion would provide a market incentive and a clear signal that the U.S. is an attractive location for manufacturing facilities, enhancing our ability to compete while building on the foundation that has been recently established. This credit will incentivize at least $11.7 billion in private sector investment and create thousands of well-paying manufacturing and construction jobs across the country.

- **Identifying and developing platform technologies in collaboration with industry:** The President's Budget provides $12 million in 2012 to initiate the Advanced Manufacturing Technology Consortia (AMTech) program, a public-private partnership aimed at improving manufacturing R&D investments and reducing the time required to bring innovations to market. In addition, the Budget includes $75 million for the Technology Innovation Program which supports public-private partnerships targeting high-risk, high-reward innovative technologies that could improve manufacturing processes.

<u>**Building on Progress**</u>

- **Recovery Act investments in clean energy manufacturing supported the foundation for an emerging manufacturing industry**: The $2.3 billion Section 48C Clean Energy Manufacturing Credit helped support at least $5.4 billion in private sector investment, substantially expanding U.S. capabilities and capacity in manufacturing clean technologies, including renewable energy, building efficiency, and advanced vehicle technologies. Over 500 applications were received, with tax credit requests totaling over $8 billion. Reward recipients were geographically distributed in more than 40 states and created tens of thousands of well-paying manufacturing and construction jobs.