

U.S. Manufacturing Competitiveness Initiative

# Ignite 3.0

Voice of American Labor  
Leaders on Manufacturing  
Competitiveness

Full Report  
December 2011



**Compete.**  
Council on  
Competitiveness

# **Ignite 3.0: Voice of American Labor Leaders on Manufacturing Competitiveness**

## **Full Report**

**THE COUNCIL ON COMPETITIVENESS** is a nonprofit, 501(c) (3) organization as recognized by the U.S. Internal Revenue Service. The Council's activities are funded by contributions from its members, foundations, and project contributions. To learn more about the Council on Competitiveness, visit our home page at [www.compete.org](http://www.compete.org).

The **U.S. MANUFACTURING COMPETITIVENESS INITIATIVE (USMCI)** is led by a CEO-level leadership council and steering committee, comprised of chief executives from industry, academia, organized labor and national laboratories.

An equally diverse and expert advisory committee is helping to shape the substantive aspects of the initiative, as well as providing ongoing counsel and support to the steering committee and Council staff.

Together, these individuals will frame the critical questions, provide the strategic direction, and develop a comprehensive set of actions to ensure a vibrant manufacturing base for America's future.

**COPYRIGHT** © 2011 Council on Competitiveness

This publication may not be reproduced, in whole or in part, in any form beyond copying permitted by sections 107 and 108 of the U.S. copyright law and excerpts by reviewers for the public press, without written permission from the publishers.

**ISBN** 1-889866-56-3

**DESIGN** Soulellis Studio

Printed in the United States of America.

# Ignite 3.0

Voice of American Labor  
Leaders on Manufacturing  
Competitiveness

Full Report  
December 2011





## Table of Contents

From Our Leadership	4
Acknowledgements	6
Key Messages	8
Summary of Recommendations	12
American Workers and U.S. Manufacturing Competitiveness	15
Developing a U.S. Manufacturing Strategy	19
Three Pillars of Competitiveness: Trade, Workforce and Infrastructure	22
Developing America's Workforce for the 21st Century	25
Building an Infrastructure that Supports U.S. Manufacturing Competitiveness	29
Conclusion	32
U.S. Manufacturing Competitiveness Initiative	34
Council on Competitiveness Membership	37
About the Council on Competitiveness	41

## From Our Leadership

The Council's flagship U.S. Manufacturing Competitiveness Initiative (USMCI) was launched in June of 2010 to address the challenges facing domestic manufacturers and drive the dialogue, policies and programs necessary to ensure the long-term health of American manufacturing. Our vision is a reinvigorated, vibrant, diversified and technologically advanced manufacturing sector that produces American jobs, economic growth, prosperity, energy sustainability and an improved ability to meet America's national security needs.

To inform our efforts, the Council began the *Ignite* report series; a multi-part, interview-driven project capturing insights from diverse leadership groups across the American manufacturing landscape. The first report, *Ignite 1.0: Voice of American CEOs on Manufacturing Competitiveness*, was released in February of 2011 and recorded the input of nearly 40 CEOs on the measures necessary to advance U.S. manufacturing. The second, *Ignite 2.0: Voices of American University Presidents and National*

*Lab Directors on Manufacturing Competitiveness* was released in August of 2011 and highlighted the perspectives of more than 30 leaders in higher education and advanced research on the role education, research and discovery play in ensuring America's manufacturing future.

We are now pleased to share with you *Ignite 3.0: Voice of American Labor Leaders on Manufacturing Competitiveness*, our third and final *Ignite* report, which captures the unvarnished insights of more than a dozen of America's top labor leaders on what is needed to kick-start the domestic economy and encourage growth of well-paying, high-skills jobs in the United States.

The outcomes of the *Ignite* reports, in conjunction with the ongoing work of the USMCI Steering Committee and Executive Advisory Committee, represent the cornerstone of the Council's National Manufacturing Strategy. This strategy explores the entire manufacturing ecosystem and the full life-cycle of product development, providing a comprehen-



**Samuel R. Allen**  
Chairman and CEO  
Deere & Company



**Michael R. Splinter**  
Chairman, President and CEO  
Applied Materials, Inc.



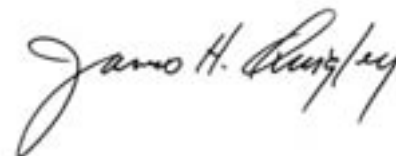
**Charles O. Holliday**  
Chairman Emeritus  
Council on Competitiveness



**Deborah L. Wince-Smith**  
President & CEO  
Council on Competitiveness



**Shirley Ann Jackson**  
President  
Rensselaer Polytechnic Institute



**James H. Quigley**  
Former CEO  
Deloitte Touche Tohmatsu



Deborah L. Wince-Smith, President & CEO, Council on Competitiveness, with William P. Hite, General President, United Association of Plumbers and Pipefitters at the Pipe Fitters' Training Center, Local Union 597, in Mokena, IL.

sive path forward for U.S. manufacturing. We will present this strategy to private sector leaders, the administration, Congress, governors and others at a national manufacturing summit in Washington, DC, on December 8, 2011.

The Council believes strongly that modern manufacturing is both complex and rapidly evolving. To remain competitive in the global marketplace, sustained cooperation and ongoing collaboration between leaders from the government and industrial, academic and labor sectors is required to effect real change. We feel that the recommendations published in the *Ignite* report series, as well as the broader efforts of the USMCI, represent the highest levels of cross-sector collaboration, and we look forward to advancing our work on manufacturing competitiveness with all stakeholders in the coming months.

In closing, we would like to extend our sincere thanks to the labor leaders—and the workers they represent—who have shared their valuable thoughts and insights with the Council. We also want to thank our colleagues at Deloitte for their tremendous support with *Ignite 3.0* and the entire *Ignite* series. Without their efforts, this project would not have been possible.

**Susan Hockfield**  
President  
Massachusetts Institute of Technology

**George H. Miller**  
Director  
Lawrence Livermore National  
Laboratory

**William P. Hite**  
General President  
United Association of Plumbers and  
Pipefitters

# Acknowledgments

The Council would like to thank the following labor leaders for taking the time to provide their perspectives and recommendations for this report.

Mark H. Ayers  
President  
Building and Construction Trades Department  
AFL-CIO

John Baker  
Assistant General Organizer  
International Longshoremen's Association,  
AFL-CIO

R. Thomas Buffenbarger  
International President  
International Association of Machinists and  
Aerospace Workers

Larry Cohen  
President  
Communications Workers of America

Leo Gerard  
President  
United Steelworkers

Owen Herrstadt  
Director of Trade and Globalization  
International Association of Machinists and  
Aerospace Workers

Edwin D. Hill  
International President  
International Brotherhood of Electrical  
Workers

William P. Hite  
General President  
United Association of Plumbers and  
Pipefitters

Frank Hurt  
International President  
The Bakery, Confectionery, Tobacco Workers  
and Grain Millers International Union  
(BCTGM)

Greg Junemann  
International President  
International Federation of Professional and  
Technical Engineers (IFPTE)

George Kohl  
Senior Director for Policy  
Communications Workers of America

Richard Trumka  
President  
AFL-CIO

## Special Acknowledgement

The Council on Competitiveness would like to extend a special thank you to Owen Herrstadt, Director of Trade and Globalization at the International Association of Machinists and Aerospace Workers, for his invaluable guidance, assistance and contributions to this report. The Council sincerely appreciates the deep perspectives that helped in the development of *Ignite 3.0: Voice of Americas Labor Leaders on Manufacturing Competitiveness*, as well as the recommendations on other leaders to interview for this third report in the *Ignite* series.



*Photograph courtesy of the Building and Construction Trades Department, AFL-CIO.*

# Key Messages

## Stakeholders Share Common Views on How to Improve U.S. Manufacturing Competitiveness

Nearly 80 interviews were conducted in support of the *Ignite* series, which included perspectives from manufacturing CEOs, university presidents, national laboratory directors and labor leaders. Interestingly, when looking back at the key themes and recommendations outlined by those participating in this three-part series, stakeholders are more closely aligned than apart on what policies and actions are crucial to improving the competitiveness of U.S. manufacturing and returning America to the leadership position enjoyed decades ago.

Consistently, participants called for constructive dialogue between stakeholders in this important discussion that set aside differences and focused on improving America's ability to thrive in a global, dynamic and increasingly competitive economy. While the constituent groups differed somewhat on detailed recommendations, it was consistently clear that concerns pertaining to tax, regulatory and energy policy, trade, education and workforce development and infrastructure were priority areas that needed to be addressed and should ideally create the foundation for the establishment of a long-term U.S. manufacturing strategy.

With respect to taxes, labor leaders were clear that their perspectives and recommendations centered on directly linking tax policy to job creation in the United States. Some supported corporate tax incentives, but only if they helped create jobs at home. Furthermore, those participants were passionate about not confusing corporate tax incentives meant to create jobs in the U.S. with corporate tax reductions.

## Manufacturing Is Important to the United States' Ability to Compete in Today's Global Marketplace

Like those who participated in *Ignite 1.0* and *Ignite 2.0*, labor leaders participating in this report felt a robust American manufacturing sector advances national security and defense readiness, increases exports and catalyzes growth across many sectors of the U.S. economy. Moreover, a strong U.S. manufacturing base plays a critical role in America's ability to lead the next generation of manufacturing and become the world leader in the research, development and production of manufactured goods that support emerging renewable energy and energy efficiency industries. A strong manufacturing base also creates high-value jobs for middle-class America, which was seen as a critical priority for all stakeholders. Further, each stressed the multiplier effect on manufacturing jobs that cultivates a vibrant and more robust network of supporting service sector jobs. Most importantly, however, the United States must develop and articulate a globally competitive, long-term innovation and manufacturing strategy that identifies inspirational goals and achievable steps to keep America in the business of innovating and "making things."

## Job Creation is the Most Critical Issue Impacting America's Economy and Prosperity

Whether discussing the economy, the development of a U.S. manufacturing strategy, trade, workforce development or infrastructure, labor leaders expressed one key theme that permeated every interview conducted for this report—the creation of good manufac-

turing jobs with high wages is the single most critical issue impacting the United States today. Many participants felt that given the economic situation in the United States (massive unemployment, etc.), policymakers, business leaders and labor leaders must first work together to jumpstart the creation of jobs in America, and then begin to tackle the other issues impacting U.S. manufacturing competitiveness over the long run. However, many were concerned that the failure of policymakers to take the steps necessary to bolster competitiveness during the past several decades, combined with a lack of understanding of the critical role manufacturing competitive capabilities have on the basic structure and fabric of the economy and its ability to innovate and sustain the American standard of living, has left the United States operating from a disadvantaged position.

Many of the labor leaders who participated in this report felt policymakers should consider a 21st century version of the Works Progress Administration (WPA) to help put Americans back to work through the creation of jobs that improve factories and retrofit buildings with new, energy efficient materials, as well as other projects that improve infrastructure, and by extension, America's ability to compete. Creating these jobs would also serve as an economic engine by growing a prosperous middle class capable of buying goods and services—actions which further encourage economic growth.

### **U.S. Policy and Trade Agreements Must Put the Interests of the United States First**

The labor leaders participating in this report felt strongly that the United States should do more to put America's interests first with respect to international trade agreements, and were passionate in recom-

mending that free trade agreements should focus on creating a level playing field where jobs in the United States can grow and American manufacturers can compete without shifting production overseas.

A majority of labor leaders expressed frustration with trade agreements that emphasize free trade but fail to adequately ensure fair trade. Trade agreements that do not adequately create and maintain good American manufacturing jobs, protect U.S. intellectual property, set limits and guidelines pertaining to foreign direct investment (especially when those investments were made on behalf of state-owned enterprises) or set standards for and maintain working conditions in both developing and developed countries in terms of safety, minimum wages and the right to organize were commonly cited concerns. Equally important were concerns regarding the lack of enforcement of trade agreements. Furthermore, participants feared the long-term unintended consequences that might result if the United States did not do more to protect its national security interests through better and more strictly enforced trade agreements. Finally, participants felt more could be done to pursue legal action against countries that violated trade policy and limited the United States' ability to compete fairly in today's global marketplace.

### **The United States Must Aggressively Develop High-Value, High-Wage Industry and Workforce Strategies**

Labor leaders consistently expressed concern about the consequences that would result if the United States failed to drive high-value, high-wage industry and workforce strategies and attempted to follow emerging markets in a race to the bottom of a low-wage industry model, noting fears about America's

ability to perpetuate a prosperous middle class. As evidence, participants noted the growing wage gap in the United States, and the continued decline in the average wage rate of America laborers, noting that the jobs that today replace manufacturing jobs transitioned overseas pay much less than they once did. Participants suggested that many of the workers employed in the United States today actually earn less than they did five, 10 and 15 years ago as cost of living has increased at a rate outpacing wages. Participants were clear when discussing the decline of U.S. wage rates, saying the goal cannot focus on creating a wage structure in the United States that is on par with other emerging markets like China and India. Participants felt countries like Germany, which have workforce strategies centered on high-value products and highly skilled workers, and are able to support higher wages, represent the correct industrial workforce model for America in the 21st century.

### **Infrastructure Development is a Critical Path to Both Job Creation and Competitiveness**

Almost unanimously, the labor leaders participating in *Ignite 3.0* felt investments in infrastructure improvements would generate economic benefit through job creation and America's ability to compete on a global scale. Many participants expressed concern about how the United States continues to fall behind other economies with respect to efficient road, air, water and rail transportation systems, as well as wide access to broadband. Participants felt a long-term initiative centered on developing a world-class infrastructure would make the United States a

more attractive place to conduct business, and that meeting the objectives of such an initiative would immediately put thousands of U.S. workers back to work. However, participants were also clear that any infrastructure improvement program must be founded on a clear manufacturing strategy and energy policy to ensure projects are linked to a centralized objective and do not waste financial or human resource investments.

To ensure long-term funding, participants also felt the United States should create a national infrastructure bank—a government-owned yet independent and professionally managed entity responsible for managing investment in, and long-term financing of, economically viable regional or national infrastructure projects. The entity would also ensure funding of infrastructure projects complements existing federal, state, local and private funding sources, and introduces a merit-based system in order to mobilize significant private sector investment, create jobs and ensure United States competitiveness. Finally, the participants felt emerging “green jobs” in renewable energy (wind, solar, etc.), next generation transportation powertrains and energy storage via advanced batteries, as well as retrofitting of existing energy infrastructures, provided the most promise for U.S. workers given the forecasted growth in these areas during the next 20 years.



*Photographs courtesy of United Steelworkers.*

# Summary of Recommendations

Recommendations denoted in italics were also outlined as recommendations in *Ignite 1.0* or *Ignite 2.0*.

## Developing a U.S. Manufacturing Strategy

1. Form a Council on Manufacturing Policy to lead the development of a U.S. manufacturing strategy through constructive dialogue between management, labor, educators and policymakers.
2. Enact tax policies that promote the creation of U.S.-based manufacturing jobs, including tax incentives directly linked to improving U.S. manufacturing facilities and creating jobs at home.
3. Develop policies that remove barriers and promote, incentivize and accelerate the research, development and production of alternative energy technologies, including extending the Advanced Manufacturing Tax Credit and expanding programs like the Department of Energy's loan guarantee program.
4. Bolster policies and initiatives that create and maintain jobs in the U.S. while also protecting America's intellectual property and other manufacturing advancements both on U.S. soil and when U.S. companies are operating abroad.
5. Protect the national security of the United States by leveraging the technology and renewable energy needs of the country as a catalyst to spur innovation, create U.S. manufacturing jobs and ensure that America continues to have the best defense systems in the world. Additionally, limit the United States' reliance on foreign countries for technologies and commodities deemed strategic to the nation's security.

## Fair Trade vs. Free Trade in the Global Marketplace

1. *Ensure U.S. rights under existing trade agreements are enforced, and ensure compliance with WTO rules and regulations internationally.*
2. Establish a set of principles to help guide the formation of trade agreements that create and maintain good manufacturing jobs in the United States, ensure benefits to the United States are defined and made a priority, set global standards for environmental and worker protections and resolve trade imbalances.
3. As permitted under WTO rules, create temporary tariffs, as necessary, which help reduce the growing trade deficit with China and other trading partners, maintain high-value manufacturing in the United States and create American manufacturing jobs.
4. Create an oversight agency independent of the USTR to monitor and enforce trade laws and agreements, and initiate trade cases under both U.S. and WTO trade laws and remedies when trade violations are identified.
5. Address China's ongoing currency manipulation practices that undervalue the yuan by filing cases as allowed under the WTO, and enacting legislation that would make purposefully undervalued currency an illegal export subsidy.
6. Create a White House Office on American Competitiveness dedicated to benchmarking the nation's competitiveness and serving as a hub responsible for monitoring foreign direct

investment into the United States and sharing competitiveness-related intelligence and recommendations with various public and private stakeholders.

7. Enhance collective bargaining policies in the United States to create wage equality for American workers, resulting in high paying manufacturing jobs that help drive prosperity and positive economic activity. In addition, require agreements with trading partners include collective bargaining provisions that protect workers' rights to organize and negotiate wages.

### **Developing America's Workforce for the 21st Century**

1. Expand programs like Helmets to Hardhats® and project labor agreements/community workforce agreements to hire and train active military personnel, disadvantaged youth and unemployed veterans for successful careers in the skilled trades.
2. Extend programs like the Work Opportunity Tax Credit that provide incentives to hire workers who have been unemployed for six months or more or who might otherwise ordinarily struggle to find work.
3. Develop targeted training programs that engage students at the secondary and post-secondary education levels so they are exposed to the opportunities that exist in the skilled trades and are provided vocational and technical training to better prepare them for apprenticeship programs and other employment opportunities once they enter the workforce.

4. *Develop federal and state programs that promote and market manufacturing as a high value, vital industry with rewarding long-term career opportunities for high school and college students in the United States.*
5. *Utilize community colleges more effectively to develop a skilled workforce with the requisite vocational skills to support technology commercialization and manufacturing.*
6. Continue to support community colleges and universities as catalysts for innovation and competitiveness through long-term government funding programs like the America COMPETES Act, the Carl D. Perkins Career and Technical Education Act and various research grants.

### **Building an Infrastructure that Supports U.S. Manufacturing Competitiveness**

1. Establish a national infrastructure bank as an independent financial institution owned by the U.S. government and able to fund a broad range of infrastructure projects through loans, loan guarantees, bonds and other sources of private capital. Also, ensure funding is directly linked to the creation of domestic jobs.
2. Coordinate various federal efforts with state and local governments and private sector efforts through a White House Office of Infrastructure Investment to ensure access to funding and promote effective public-private partnerships that create U.S. jobs.

3. *Outline a comprehensive energy policy that encourages reinvestment in current infrastructures, pursues energy efficiency and conservation and balances investment across a diverse portfolio of all fuel sources—including solar, wind and nuclear—while tapping critical U.S. assets in coal, natural gas and offshore oil.*
4. *Improve ports, waterways, railroads, highways, the electric grid and IT infrastructures. Priority should be given to projects that improve export capabilities and efficient movement of goods in, out and throughout the United States.*
5. Within the context of WTO regulations, encourage a “buy-domestic” policy that maximizes use of American-made materials on infrastructure projects funded by federal, state and/or local governments.
6. Help state and local governments fund infrastructure projects by providing federal guarantees that help lower the cost of borrowing and minimize disruptions to the municipal bond market. Also, reinstate the Build America Bonds program, which issued \$181 million on taxable municipal bonds before expiring at the end of 2010.

# American Workers and U.S. Manufacturing Competitiveness

Since the dawn of manufacturing in America, the pride, ingenuity and patriotism of the American workforce have been synonymous with the United States being recognized as one of the greatest manufacturing economies in the world. American workers have been front-and-center through the most important manufacturing-driven eras in history, instilling not only the values that resulted from hard work, but also a sense of accomplishment that comes from “making things.” From the early days of the Industrial Revolution, to the mass production era ushered in by Henry Ford, to the nearly three million women who worked in factories across the United States during World War II, to the great post-war middle class that re-industrialized the world, American workers have demonstrated they are a crucial factor in driving U.S. manufacturing competitiveness and economic prosperity.

Through the globalization of manufacturing during the past several decades, however, opportunities for American workers to contribute to U.S. manufacturing competitiveness have declined. Since 2002 alone, the United States has lost more than five million manufacturing jobs.<sup>1</sup> Manufacturing’s percentage of GDP has also declined, from contributing 19 percent to U.S. GDP in 1991 to only 13.4 percent in 2008.<sup>2</sup> This trend has had a significant negative impact on the domestic workforce, both in terms of the skills workers have to contribute to manufacturing competitiveness and the economic prosperity of the American middle class.

In fact, according to a report released by the United States Congressional Budget Office in October 2011, household income for the top 1 percent of the U.S. population with the highest income grew 275 percent between 1979 and 2007.<sup>3</sup> Income for 60 percent of the population in the middle of the income scale, conversely, grew only 37 percent during that same period.<sup>4</sup> While the top fifth of the population saw a 10 percent increase in their share of income (most going to the top 1 percent), all other groups actually saw their shares decline by 2 to 3 percent.<sup>5</sup>

Despite the precipitous decline in U.S. manufacturing jobs, average American citizens still believe U.S.-based manufacturing is important to the country and are steadfast in their commitment to creating a strong, healthy, globally competitive manufacturing sector in the United States. In a national survey conducted by Deloitte,<sup>6</sup> 86 percent of respondents indicated that the manufacturing industry was important to America’s economic prosperity, 85 percent felt a strong manufacturing industry was important to their standard of living and 77 percent felt manufacturing was important to America’s national security.<sup>7</sup> Respondents also overwhelmingly felt that the United States needed

1 “The Connection Between Manufacturing Jobs and Exports,” Economic Modeling Specialists Inc., <http://www.economicmodeling.com/2011/10/06/the-connection-between-manufacturing-jobs-and-exports>.

2 “World Development Indicators and Global Development Finance,” The World Bank, <http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2>.

3 “Trends in the Distribution of Household Income Between 1979 and 2007,” United States Congressional Budget Office, <http://www.cbo.gov/doc.cfm?index=12485>.

4 *ibid.*

5 *ibid.*

6 As used in this document, “Deloitte” means Deloitte & Touche LLP, Deloitte Consulting LLP, Deloitte Tax LLP, and Deloitte Financial Advisory Services LLP, which are separate subsidiaries of Deloitte LLP. Please see <http://www.deloitte.com/us/about> for a detailed description of the legal structure of Deloitte LLP and its subsidiaries.

7 “Unwavering commitment: The public’s view of the manufacturing industry today,” <http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us%20cip%202011PublicViewonManufacturingReport%20090811.pdf>.

a strategic approach to the development of its manufacturing base and should make doing so a national priority.<sup>8</sup>

However, these same respondents noted serious concerns with pursuing careers in manufacturing themselves or encouraging others (e.g. their children) to enter the manufacturing industry. A number of reasons were cited, but top-of-mind was concern related to the continued off-shoring of manufacturing jobs. More than three-quarters of the respondents (78 percent) felt manufacturing jobs are the first to be moved offshore and, as a result, only 37 percent believe the industry offers long-term, stable employment opportunities.<sup>9</sup>

Compounding their concerns about the stability of today's manufacturing jobs was a prevailing belief that policymakers were not taking the steps necessary to ensure America's manufacturing businesses could compete effectively with foreign rivals. Respondents cited leadership at the federal and state levels, trade policies, tax rates on individuals and corporate tax policies as items detracting from a competitive advantage for American businesses relative to those in other nations.<sup>10</sup>

The paradox is clear—average American citizens believe manufacturing is important, but continued off-shoring of jobs historically filled by blue-collar laborers does not provide an adequate incentive for experienced workers or young people entering the workforce to develop the requisite skills employers seek to then pursue careers in the manufacturing industry. In addition, faith in the leadership of policymakers to help ensure America's manufacturing business can compete effectively is also lacking.

Addressing this complex challenge requires a set of both short-term and long-term goals, and requires cooperation between all stakeholders—business

leaders, policymakers, educators and labor leaders. A number of recommendations have already been developed and published in *Ignite 1.0: Voice of American CEOs on Manufacturing Competitiveness* and *Ignite 2.0: Voices of American University Presidents and National Lab Directors on Manufacturing Competitiveness*.

*Ignite 3.0: Voice of American Labor Leaders on Manufacturing Competitiveness* unveils the final set of recommendations offered by leaders of some of America's largest labor unions. It is important to note that this report attempts to capture the perspectives offered by the participants, however, some labor leaders do not agree with all the recommendations provided in the following pages. In addition, some labor leaders felt "competitiveness" should be clearly defined for *Ignite 3.0*, recommending that for the context of this report "competitiveness" be defined as America's ability to create and maintain high-wage manufacturing jobs using policies and practices that support international trade of high-value goods made in the United States.

## Approach & Methodology

In the Fall of 2011, Deloitte interviewed approximately a dozen leaders of America's labor unions, who represent a large population of the country's labor workforce. The discussions were conducted one-on-one via telephone and typically lasted one hour. Participants were asked to provide their perspectives on the U.S. economy for the next 12 to 24 months and through year 2020. They were also asked to address the importance of America's ability to "make things," both in the context of the domestic economy and America's prosperity in the 21st century. Finally, respondents were asked to provide their perspectives and recommendations on what actions stakeholders involved in this important discussion—business leaders, policymakers, educators and labor

8 "Unwavering commitment: The public's view of the manufacturing industry today," <http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us%20cip%202011PublicViewonManufacturingReport%20090811.pdf>.

9 *ibid.*

10 *ibid.*

leaders—could take to immediately improve U.S. manufacturing competitiveness, as well as lay the foundation for a strong, viable and sustainable U.S. industrial base for generations to come.

## **Perspectives on America's Economic Future**

Like those who participated in the previous *Ignite* reports, the state of the U.S. economy and the potential fallout of other global economic crises were also of significant concern for the labor leaders participating in this report. While most participants expressed concern about the speed of the current economic recovery, some were optimistic and felt the upcoming 2012 elections and the current softening of the U.S. dollar would result in increased economic activity and some manufacturing jobs returning to the United States. Still, a majority of the participants felt there was a reasonable chance the U.S. economy would fall back into another recession within the next 12 months.

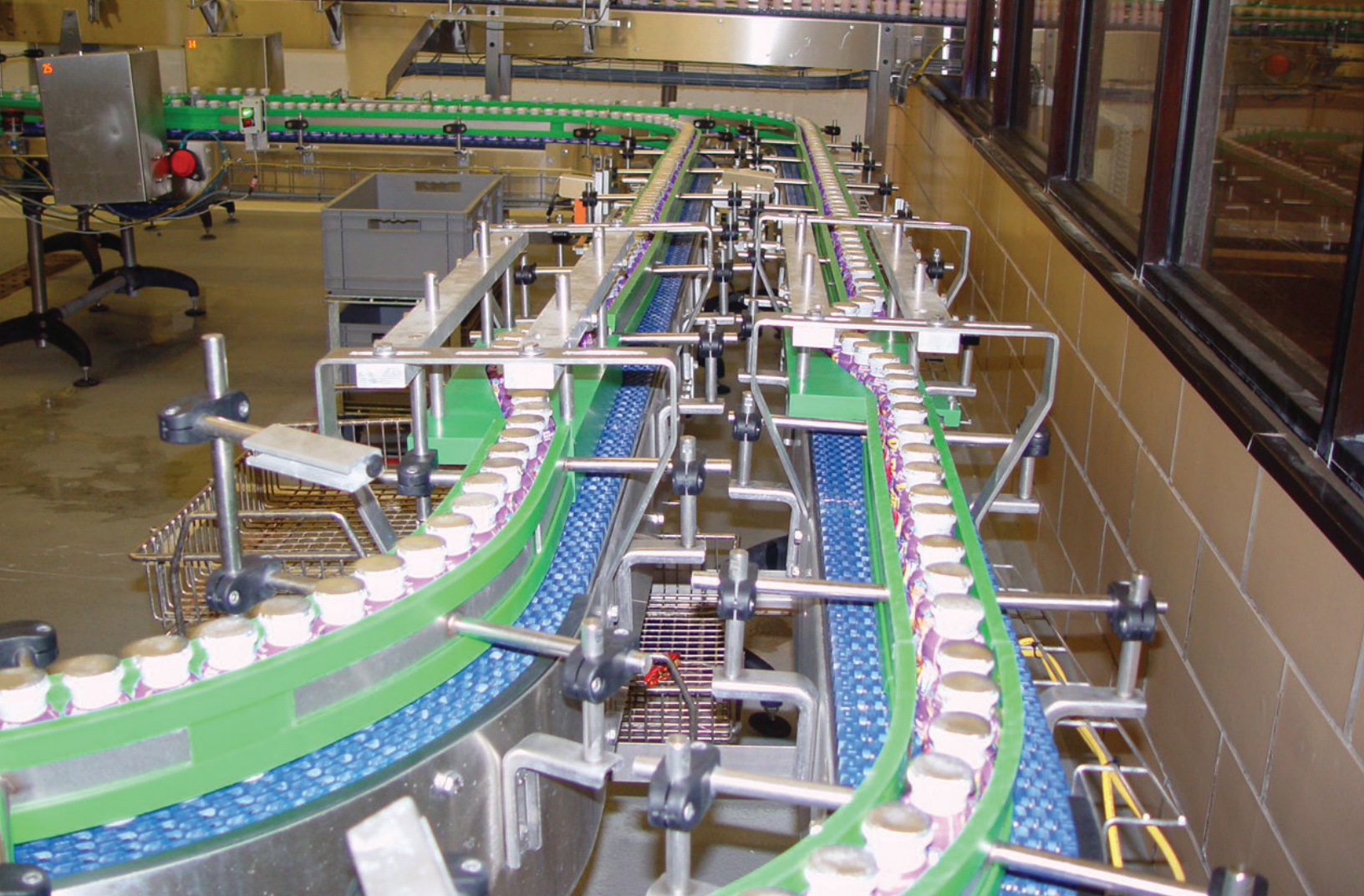
Participants consistently expressed concern that factors necessary to drive the economy toward a sustained and robust recovery today or in the near term are not present. Many noted the absence of net exports, limited employment opportunities and the lack of substantial business investment, as well as expiring trade agreements, as clear signals that the U.S. economy could get worse before it gets better and, therefore, likely result in continued high unemployment.

While participants applauded recent hiring activity in the U.S. manufacturing sector, they felt more could be done (e.g. incentives for hiring U.S. workers) to accelerate the rate and volume of new hires. Participants also expressed concern about the long-term sustainability of recent hires, noting fears that such jobs might be lost again in the near future if the economy stalls.

Many also felt the jobs crisis was the most important issue impacting the economy today, describing the U.S. debt situation as a “fake debate” centered on an issue that is not as urgent as other challenges impacting the U.S. economy. Participants described U.S. debt as an important long-term issue that will need to be addressed to ensure a healthy, growing U.S. economy for generations to come.

In addressing public policy centered on job creation in the United States, a majority of the labor leaders felt legislation like the American Jobs Act would not exacerbate the U.S. deficit, and welcomed what appears to be increased dialogue and efforts by policymakers to jumpstart the U.S. economy through job creation. Concern, however, was expressed about the pending retirement of the American Recovery and Reinvestment Act (ARRA) and how the economy would react to the absence of government-led efforts.

Many of the participants felt that getting the U.S. economy back on track will require the development and adoption of a broad and long-term U.S. manufacturing strategy. Doing so, according to the labor leaders, would eliminate many uncertainties about the future of manufacturing in America, and result in inspirational goals and objectives that incentivize manufacturers to increase investments in R&D and create jobs in the United States.



*Photographs at left courtesy of The Bakery, Confectionery, Tobacco Workers and Grain Millers International Union (BCTGM).*

# Developing a U.S. Manufacturing Strategy

All of the labor leaders participating in this report felt manufacturing was critical to America's future and important to the prosperity of America's middle class. Many expressed frustration with what they described as the destruction of America's middle class resulting from the decline of U.S. manufacturing. Participants also felt the United States today is suffering from the self-inflicted wounds and consequences of collective actions and inactions, while other nations were using manufacturing to spur their economies and grow their middle class.

To improve and sustain the economic prosperity of the United States, participants consistently called for the formation of a Council on Manufacturing Policy with the primary objective of developing a U.S. manufacturing strategy through collaborative and constructive dialogue between management, labor, educators and policymakers. Together, the council and adopted strategy would seek to address policy concerns limiting U.S. manufacturing competitiveness, as well as develop a clear set of stable short-term and long-term manufacturing objectives in the areas of trade and globalization, talent and infrastructure. Participants also recommended that a U.S. manufacturing strategy should provide a link between national security, commerce and foreign direct investment, and be a key driver in creating U.S.-based manufacturing jobs.

## Tax Policy and Job Creation

Most of the labor leaders interviewed for this report felt the United States should enact tax policies that promote the creation of U.S.-based manufacturing jobs. Participants outlined a number of recommendations, including tax incentives directly linked to improving U.S. manufacturing facilities and creating

U.S. manufacturing jobs. Specifically, participants felt the United States should eliminate tax incentives that encourage U.S. manufacturers to move existing jobs to foreign markets, while also providing tax incentives for manufacturers that create new jobs in the United States. At the same time, U.S. manufacturers should be incentivized, through investment tax credits, to make improvements and renovations to aging facilities. Doing so, according to participants, would create jobs for U.S. workers and result in improved infrastructure and advanced manufacturing facilities that would support a U.S. manufacturing strategy and long-term manufacturing objectives. Policymakers should also enact legislation and countermeasures designed to offset the disadvantages to American companies operating in the United States caused by the combination of lower income tax rates and value-added tax structures often employed by many U.S. trading partners. In addition, the labor leaders almost unanimously felt U.S. manufacturers should be incentivized for hiring U.S. workers in an effort to potentially offset the low-wage advantage offered by other global markets.

## Renewable Energy and Green Jobs

Also linked to job creation was a consistent call by labor leaders for the United States to develop policies that helped promote and incentivize the research, development and production of alternative energy technologies (e.g. solar panels, wind mills, advanced batteries, etc.). Participants felt an extension of the Advanced Manufacturing Tax Credit, which provides incentive for investments in advanced energy products, was critical if America is to lead the next generation of manufacturing. Participants also felt expanding programs like Title 17—the Department of Energy's loan guarantee program promoting the

deployment of clean, ready-to-commercialize energy technologies across the United States<sup>11</sup>—would create jobs not only in the manufacturing sector, but also in the commercial and industrial building sector. The extension of cash grant programs, noted participants, like the existing 1603 Program—a program under the American Recovery and Reinvestment Act that reimburses eligible applicants for a portion of the cost of installing specified energy property used in a trade or business<sup>12</sup>—would also be beneficial to creating high-paying, advanced manufacturing jobs by increasing the demand for renewable energy technologies and products.

## Foreign Direct Investment

Foreign direct investment (FDI) was a concern voiced by many of the labor leaders participating in this report. Many acknowledged the benefits of FDI by companies and countries with strong trade alliances with the United States, but felt FDI by state-owned enterprises from countries like China posed a significant risk to the United States and its long-term manufacturing competitiveness. A number of areas of concern were cited, including intellectual property protection, R&D, manufacturing-driven innovation and sustainability or creation of U.S. manufacturing jobs. Participants felt that unchecked, the investment of foreign state-owned enterprises would, in the long term, result in innovations and new products developed in the United States being transferred for production to those investing countries—thereby also transferring the economic benefits. Similar to the concerns described by the university presidents and national laboratory directors participating in *Ignite 2.0*, labor leaders felt that the continued off-shoring of U.S. manufacturing to investing countries would result in the United States missing opportunities related to future innovations and applications of existing or next-generation products. Labor leaders

consistently felt the United States should adopt a variety of initiatives centered on protection against foreign governments' predatory practices targeted at America's intellectual property and other manufacturing advancements. Further, policymakers should adopt policies that would prevent innovations developed in the United States, and funded with tax payer money, from being manufactured outside of the United States.

## National Security

An important objective a U.S. manufacturing strategy should seek to achieve, according to the labor leaders participating in this report, was the continued advancement of the technology and manufacturing capacity supporting the defense of the United States. Many of the labor leaders, like those participating in *Ignite 1.0* and *Ignite 2.0*, felt the needs of the U.S. government were perhaps the most effective catalyst in spurring the development of innovative new technologies.

In providing their perspectives, the labor leaders touched on the needs of the Department of Defense (DoD), as well as the needs of other government entities like the Department of Energy and NASA. When discussing the DoD, participants were confident that a manufacturing strategy outlining objectives to improve America's defense systems would not only spur innovation, but also create a significant number of U.S. manufacturing jobs, provided those new defense systems were manufactured in America. Further, many of the labor leaders described in detail the numerous benefits derived from a national objective of moving armed forces transportation systems (land, sea and air) to alternative energy sources.

In addition to leveraging America's defense needs to spur innovation and increase U.S. manufacturing output, all of the participants expressed concern about the trade deficit the United States has today with China for "advanced technology products," including semiconductors, satellite technology, fiber optics, precious metals and a host of other commodities criti-

11 "DOE Loan Guarantee Program: Optimizing the Program for Job Creation and Clean Energy," Solar Energy Industries Association, [http://www.seia.org/galleries/FactSheets/Factsheet\\_DOE\\_LGP.pdf](http://www.seia.org/galleries/FactSheets/Factsheet_DOE_LGP.pdf).

12 "1603 Program: Payments for Specified Energy Property in Lieu of Tax Credits," United States Department of the Treasury, <http://www.treasury.gov/initiatives/recovery/Pages/1603.aspx>

cal to the production of America's defense systems. Labor leaders felt strongly that the United States' reliance on other countries for these commodities and technologies also put America's national security at risk.

Labor leaders consistently felt that policymakers should enact legislation that identified items (commodities and products) critical to the national security of the United States, resulting in more stringent guidelines and legislative reviews, before sourcing goods from foreign governments or transferring any technology or jobs overseas. Participants were clear in that products and commodities used in military applications should be governed under this legislation, as should be those technologies and products that are today used for civilian applications (e.g. biotech medicines, avionics, etc.) but can be easily transferred to military use.

Finally, many participants commented on the more fundamental linkage between the United States having a vibrant manufacturing capability and national security. Strength in the capability and capacity to manufacture and innovate advanced manufactured products is a fundamental and critical element for the defense of the nation. Without the ability to make what is necessary to defend America and its citizens, national security is at great risk and the United States would increasingly become vulnerable to the agendas of other foreign governments. Participants felt that the imbalance of economic power, particularly resulting from a decline in manufacturing capability, will surely lead to an imbalance of military power and open the door to unthinkable future national security risks.

## Developing a U.S. Manufacturing Strategy

To address these challenges, labor leaders put forth the following recommendations.

1. Form a Council on Manufacturing Policy to lead the development of a U.S. manufacturing strategy through constructive dialogue between management, labor, educators and policymakers.
2. Enact tax policies that promote the creation of U.S.-based manufacturing jobs, including tax incentives directly linked to improving U.S. manufacturing facilities and creating jobs at home.
3. Develop policies that remove barriers and promote, incentivize and accelerate the research, development and production of alternative energy technologies, including extending the Advanced Manufacturing Tax Credit and expanding programs like the Department of Energy's loan guarantee program.
4. Bolster policies and initiatives that create and maintain jobs in the U.S. while also protecting America's intellectual property and other manufacturing advancements both on U.S. soil and when U.S. companies are operating abroad.
5. Protect the national security of the United States by leveraging the technology and renewable energy needs of the country as a catalyst to spur innovation, create U.S. manufacturing jobs and ensure that America continues to have the best defense systems in the world. Additionally, limit the United States' reliance on foreign countries for technologies and commodities deemed strategic to the nation's security.

# Three Pillars of Competitiveness: Trade, Workforce and Infrastructure

The labor leaders interviewed for this report were all passionate about U.S. manufacturing competitiveness and how a strong and vibrant industrial base could deliver both short-term and long-term benefits to Americans and the U.S. economy. Participants felt that changes in the following areas would result in immediate improvements in America's ability to compete in today's global market, as well as set the foundation for sustained manufacturing competitiveness for years to come.

## Fair Trade vs. Free Trade in the Global Marketplace

Throughout the interviews, many participants referred to a concept they described as “fair trade vs. free trade,” and almost unanimously expressed concern in two key areas with respect to trade and globalization—enforcing existing policies and regulations and creating a level playing field to more effectively compete with global manufacturing competitors.

Many of the labor leaders felt more could be done to enforce trade regulations outlined in various free trade agreements the United States has with markets around the world, as well to enforce trade policies outlined by the World Trade Organization (WTO). Some participants felt that despite formal policies and regulatory guidelines, there were no rules of engagement, and countries like China were imposing policies and practices that benefited their domestic economies and manufacturing industries, yet were illegal under the WTO. Furthermore, like some executives interviewed for *Ignite 1.0*, participants almost unanimously felt that the United States must do more—through tariffs as necessary and other enforcement mechanisms—to bring action against those countries that violate trade laws to ensure U.S. trade rights are protected.

Specifically, participants called for the creation of an oversight entity responsible for monitoring and enforcing the adherence by foreign countries to policies outlined by either the WTO or trade agreements with the United States. Many felt such an entity should be independent of the Office of the United States Trade Representative (USTR) to allow for more effective enforcement of trade policies and agreements, including the initiation of anti-dumping and countervailing duties when unfair trade practices are identified. Participants repeatedly expressed frustration with China's currency manipulation practices, describing the undervaluation of the yuan as one of the most damaging practices impacting U.S. manufacturing today. Participants felt the United States should do more to address China's ongoing currency manipulation practices, including filing cases with the WTO and enacting legislation that would make purposefully undervalued currency an illegal export subsidy.

In addition to enforcement of trade policies, a majority of the labor leaders felt existing and recently enacted free trade agreements did not adequately promote the U.S. manufacturing industry and U.S. jobs or create a level playing field on which to compete. Some participants felt that, provided a level playing field, U.S. manufacturers today are the most competitive manufacturers in the world, given America's leadership in both productivity and the quality of American-made goods. However, participants felt the United States was at a disadvantage with respect to the total cost of manufacturing because other countries do not recognize or enforce basic laws and regulations regarding the environment and fundamental human rights, which include internationally recognized labor standards (e.g. right to form a union and engage in

collective bargaining, prohibitions against child labor, discrimination, forced or prison labor and safety and health in the workplace).

To help level the field, participants felt trade agreements should incorporate the International Labour Organization's core internationally recognized labor rights and standards (referenced above) and strong environmental protections. Trade agreements must also make the creation and maintenance of U.S. jobs a priority and eliminate economic policies enacted by other nations that are detrimental to U.S. workers.

Many of the participants felt vigorously protecting American workers and intellectual property both in the United States and abroad in the face of aggressive foreign industrial policies is a critical component to U.S. global trade activities. In addition to an entity responsible for monitoring and enforcing trade policy, some participants felt the White House should create an office dedicated to American competitiveness that would be responsible for benchmarking U.S. competitiveness against other countries, as well as serving as a hub capable of sharing competitiveness-related intelligence and recommendations with the various stakeholders—public and private—important to the ongoing discussion on U.S. manufacturing competitiveness. The recommended entity would also be responsible for reviewing foreign direct investment into the United States to ensure America's interests are considered, and coordinate economic cooperation on important commodities (e.g. rare-earth minerals) to promote global economic prosperity and avoid shortfalls that may result in economic decline.

Finally, some participants felt management, policymakers and labor leaders could work together to enhance collective bargaining in the United States

and, further, require countries interested in developing strong trade relationships with America to provide workers the right to organize. Some participants described collective bargaining as a fundamental process in improving wage equality, which as previously mentioned, has declined continuously for the last several decades. Those participants commenting on this issue also expressed frustration about recently enacted trade policies, mentioning Colombia in particular, and noting that the absence of collective bargaining requirements further jeopardized American jobs and did little to level the playing field. Participants described collective bargaining as “the voice of America's economy,” and without U.S. policies that enhance the collective bargaining process or demand similar worker protections from trading partners, American workers would continue to experience flat wages resulting in a flat economy and a low standard of living.

One participant noted that the United States should not measure success by the number of trade agreements signed. Instead, success should be measured by the results of those agreements and the positive impact on the U.S. economy and workforce.

## Fair Trade vs. Free Trade in the Global Marketplace

To address these challenges, labor leaders put forth the following recommendations.

Recommendations denoted in italics were also outlined as recommendations in *Ignite 1.0* or *Ignite 2.0*.

1. *Ensure U.S. rights under existing trade agreements are enforced, and ensure compliance with WTO rules and regulations internationally.*
2. Establish a set of principles to help guide the formation of trade agreements that create and maintain good manufacturing jobs in the United States, ensure benefits to the United States are defined and made a priority, set global standards for environmental and worker protections and resolve trade imbalances.
3. As permitted under WTO rules, create temporary tariffs, as necessary, which help reduce the growing trade deficit with China and other trading partners, maintain high-value manufacturing in the United States and create American manufacturing jobs.
4. Create an oversight agency independent of the USTR to monitor and enforce trade laws and agreements, and initiate trade cases under both U.S. and WTO trade laws and remedies when trade violations are identified.
5. Address China's ongoing currency manipulation practices that undervalue the yuan by filing cases as allowed under the WTO, and enacting legislation that would make purposefully undervalued currency an illegal export subsidy.
6. Create a White House Office on American Competitiveness dedicated to benchmarking the nation's competitiveness and serving as a hub responsible for monitoring foreign direct investment into the United States and sharing competitiveness-related intelligence and recommendations with various public and private stakeholders.
7. Enhance collective bargaining policies in the United States to create wage equality for American workers, resulting in high paying manufacturing jobs that help drive prosperity and positive economic activity. In addition, require agreements with trading partners include collective bargaining provisions that protect workers' rights to organize and negotiate wages.

# Developing America's Workforce for the 21st Century

All of the labor leaders interviewed for this report felt building a highly skilled workforce was the most critical component to creating the next generation of manufacturing jobs in the United States and securing America's manufacturing leadership in the 21st century. Today, according to the *2010 Global Manufacturing Competitiveness Index*,<sup>13</sup> which is based on input from more than 400 C-suite manufacturing executives around the world, the United States ranks fourth in global manufacturing competitiveness behind China, India and South Korea, and is expected to fall to fifth by 2015.

These same executives indicate that talent-driven innovation is the No. 1 contributor to the manufacturing competitiveness of any nation. However, U.S. manufacturing executives indicate today, during a period of sustained high unemployment, they cannot find enough skilled workers to fill current openings or to drive future growth aspirations. According to a 2011 survey conducted by Deloitte, 74 percent of executives responding indicate workforce shortages and skills deficiencies in skilled production (machinists, operators, craft workers, distributors and technicians) have had the most significant negative impact on their company's ability to expand operations or improve productivity.<sup>14</sup>

Workforce development is a passion and competency for many of the labor leaders participating in *Ignite 3.0*. Several labor leaders indicated their organizations were spending substantial money on workforce development, education and continuing educa-

tion and training centers, much of it done without any kind of government funding or support. These leaders stress that technology constantly is changing, and skills and capabilities need to be improved and refreshed on a constant basis to ensure America's workforce is the most capable and competitive in the world. But the feedstock of next generation workers continues to be a challenge as students in primary and secondary education are not encouraged to pursue careers as skilled manufacturing workers, and programs that would expose students to vocational careers and provide actual skills training are often lacking or non-existent. Moreover, some participants expressed frustration about industry's boom-bust employment cycles in the United States, which many described as a key contributor to workforce shortages in economic growth periods. Participants noting this concern consistently pointed to Europe, where workers remain employed during economic cycles, thereby ensuring access to ongoing training and a highly skilled talent pool, while also creating a sense of stability for those interested in pursuing careers in the skilled trades.

All participants felt that crucial to taking a leadership position is providing early education and ongoing training that develops the requisite skills manufacturing companies seek from their workers. Throughout the discussions, participants highlighted several established programs that their organizations have created to help their members deliver those skills to their employers.

For example, one participant highlighted how his organization has established an accredited college, and also works closely with community colleges, to create flexible pathways to certifications and other

13 "2010 Global Manufacturing Competitiveness Index," [www.deloitte.com/globalcompetitiveness](http://www.deloitte.com/globalcompetitiveness).

14 "Boiling point? The skills gap in U.S. manufacturing," [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/AD/us\\_PIP\\_2011SkillsGapReport\\_01142011.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/AD/us_PIP_2011SkillsGapReport_01142011.pdf).



*Photographs courtesy of United Association of Plumbers and Pipefitters.*



vocational degrees (a recommendation also discussed in *Ignite 2.0*). In describing the program, the participant highlighted his organization's financial and time commitment to train 40,000 new and 100,000 existing laborers for jobs in the new energy sector. The organization also provides pre-training for young workers to improve basic math and reading skills, which better prepares them to succeed in the accredited program or other vocational training programs.

Another described the successful Helmets to Hardhats® program, the largest of its kind, which has trained more than 5,000 returning military personnel prior to discharge and integrated them into productive jobs back home. Veterans in Piping was another program mentioned with similar objectives. These programs not only help repay returning veterans for their sacrifices, but contribute significantly to developing a highly skilled American workforce supported by union organizations dedicated to their ongoing education and skills development. These types of programs also wisely tap into outstanding human capital, with excellent foundation skills and attributes—discipline, dedication, maturity, a strong work ethic, an ability and desire to work with their hands, and often technical training including computer skills and solid math skills—as trained by the U.S. military.

Despite these success stories, participants were also quick to point out that more needs to be done, and these pockets of progress are not enough to address the significant need in the United States to re-train existing workers or provide the enticement and education to lure young workers into the manufacturing industry. Working more closely with community colleges and other learning institutions were often mentioned as requirements if America is to tackle these issues. In addition, while many participants expressed concern and frustration with political debate around

legislation like the American Jobs Act, they did suggest that public attention on the jobs crisis in the United States and the ongoing debate demonstrated to teenagers and young adults that the United States values manufacturing, and that opportunities to build long-term careers as a skilled tradesman did exist.

Finally, participants often stressed that education, training and high-skilled workers will be useless if businesses are not in a position to create jobs. Thus, there was typically strong support for all measures that would allow U.S. manufacturers to be more competitive, and for policies that would help them grow and create jobs here in America. On this, they were in complete alignment with their *Ignite 1.0* and *Ignite 2.0* participant peers.

## Developing America's Workforce for the 21st Century

To address these challenges, labor leaders put forth the following recommendations.

Recommendations denoted in italics were also outlined as recommendations in *Ignite 1.0* or *Ignite 2.0*.

1. Expand programs like Helmets to Hardhats<sup>®</sup> and project labor agreements/community workforce agreements to hire and train active military personnel, disadvantaged youth and unemployed veterans for successful careers in the skilled trades.
2. Extend programs like the Work Opportunity Tax Credit that provide incentives to hire workers who have been unemployed for six months or more or who might otherwise ordinarily struggle to find work.
3. Develop targeted training programs that engage students at the secondary and post-secondary education levels so they are exposed to the opportunities that exist in the skilled trades and are provided vocational and technical training to better prepare them for apprenticeship programs and other employment opportunities once they enter the workforce.
4. *Develop federal and state programs that promote and market manufacturing as a high value, vital industry with rewarding long-term career opportunities for high school and college students in the United States.*
5. *Utilize community colleges more effectively to develop a skilled workforce with the requisite vocational skills to support technology commercialization and manufacturing.*
6. Continue to support community colleges and universities as catalysts for innovation and competitiveness through long-term government funding programs like the America COMPETES Act, the Carl D. Perkins Career and Technical Education Act and various research grants.

# Building an Infrastructure that Supports U.S. Manufacturing Competitiveness

The labor leaders participating in this report, like those executives interviewed for *Ignite 1.0*, felt the United States must be an attractive place to do business and consistently noted that a modern and efficient infrastructure that accelerated the pace of business while also reducing costs was a key driver in America's ability to compete. Participants almost unanimously expressed concern about the aging infrastructure in the United States and felt that America's roadways, airports, waterways, electric grid and broadband were not keeping pace with new, emerging economies whose advanced infrastructures enticed U.S. manufacturers to move jobs overseas.

Almost all of the labor leaders felt the United States needs a long-term plan to improve America's infrastructure during the next five years, and called for a one trillion dollar annual investment to fund improvement activities. Doing so, according to participants, would ensure the improvement of America's roads, bridges and other critical infrastructure components. Participants also felt no other program would do more to create long-term, high paying jobs in the United States, creating an economic engine by putting thousands of people back to work while also encouraging private sector investment. Some participants pointed to the Federal Aid Highway Act of 1956, which is considered the largest public works project in U.S. history, as an example of how large, nationally supported infrastructure projects create long-term benefits and prosperity. Participants also pointed to recent Congressional Budget Office estimates suggesting every dollar of infrastructure spending generates an additional 60 cents in economic activity (for a total increase to GDP of \$1.60).

Many participants touched upon the idea of a national infrastructure bank (NIB), which is a provision outlined in the American Jobs Act currently being debated by policymakers. Under the proposed legislation, the Act would establish a NIB in the form of the American Infrastructure Financing Authority (AIFA).<sup>15</sup> The AIFA would be government-owned yet independent and professionally managed, and be responsible for managing investment in, and long-term financing of, economically viable regional or national infrastructure projects. The AIFA would also ensure funding of infrastructure projects complements existing federal, state, local and private funding sources and introduce a merit-based system in order to mobilize significant private sector investment, create jobs and ensure U.S. competitiveness through an institution that limits the need for ongoing federal funding.<sup>16</sup>

While those participating in the report unanimously called for infrastructure improvement projects, and for the most part supported the creation of a NIB, they also felt doing so without a national manufacturing strategy or energy policy would result in unfocused and decentralized projects that fail to carry forward a broader agenda designed to create a long-lasting competitive advantage for the United States. Many felt that, like Germany, the United States should establish a set of infrastructure improvement goals that allowed all stakeholders—business leaders, policy makers, educators and laborers—to collaborate in meeting those objectives.

15 "American Jobs Act of 2011: Proposal to Establish National Infrastructure Bank," National Conference of State Legislators, <http://www.ncsl.org/default.aspx?tabid=23596>.

16 *ibid.*

From improvements to the electrical grid designed to make energy transmission more efficient and support emerging technologies like electric vehicles, to retrofitting all government buildings in the United States to reduce energy consumption, to improving mass availability of high-speed broadband, labor leaders unanimously felt infrastructure opportunities existed, but cautioned that embarking on these projects without a clear vision for the future would result in wasted resources—both financial and human. Participants felt that the United States must develop an energy policy through 2020 at a minimum, and felt a U.S. manufacturing strategy must align and connect trade, tax, investment and technology policies. Such strategies must also include tax and R&D incentives.

Many of the participants felt “green jobs” in renewable energy (wind, solar, etc.), next generation transportation powertrains, energy storage via advanced batteries and the retrofitting of existing energy infrastructures provided the most promise for U.S. workers, noting forecasted growth in these areas from 9 million jobs in 2007 to as many as 37 million jobs by 2030<sup>17</sup>—many of which are not subject to off-shoring to overseas markets.

In addition, participants felt that while the development of retraining programs was an imperative to meeting the needs of companies operating in these “green” industries, many metal workers, machinists, construction workers, carpenters and other skilled tradesmen already possess the requisite skills and could be put back to work today if job opportunities existed. In that regard, participants felt that the United

States could do more to promote and incentivize investment in these emerging industries, thus spurring job creation, as well as education and training programs designed to help ensure America has one of the most highly skilled workforces in the world, capable of supporting growth for years to come.

Some participants also suggested that making these investments was one step, but including provisions in legislation and supporting state and federal funding programs that required infrastructure improvement projects also use supplies manufactured in the United States would be another positive step in fueling economic growth. Many expressed frustration that previous legislation such as the ARRA did not include provisions that included more stringent mandates for using America-made products for projects funded by American taxpayers. Many felt that including this provision would have resulted in the creation of additional jobs, as U.S. factories and workers would have been re-hired to manufacture the supplies needed to complete projects funded by ARRA.

17 “ASES Green Collar Jobs report forecasts 37 million jobs from renewable energy and energy efficiency in U.S. by 2030,” American solar Energy Society, [http://www.ases.org/index.php?option=com\\_content&view=article&id=465&Itemid=58](http://www.ases.org/index.php?option=com_content&view=article&id=465&Itemid=58).

## Building an Infrastructure that Support U.S. Manufacturing Competitiveness

To address these challenges, labor leaders put forth the following recommendations.

Recommendations denoted in italics were also outlined as recommendations in *Ignite 1.0* or *Ignite 2.0*.

1. Establish a national infrastructure bank as an independent financial institution owned by the U.S. government and able to fund a broad range of infrastructure projects through loans, loan guarantees, bonds and other sources of private capital. Also, ensure funding is directly linked to the creation of domestic jobs.
2. Coordinate various federal efforts with state and local governments and private sector efforts through a White House Office of Infrastructure Investment to ensure access to funding and promote effective public-private partnerships that create U.S. jobs.
3. *Outline a comprehensive energy policy that encourages reinvestment in current infrastructures, pursues energy efficiency and conservation and balances investment across a diverse portfolio of all fuel sources—including solar, wind and nuclear—while tapping critical U.S. assets in coal, natural gas and offshore oil.*
4. *Improve ports, waterways, railroads, highways, the electric grid and IT infrastructures. Priority should be given to projects that improve export capabilities and efficient movement of goods in, out and throughout the United States.*
5. Within the context of WTO regulations, encourage a “buy-domestic” policy that maximizes use of American-made materials on infrastructure projects funded by federal, state and/or local governments.
6. Help state and local governments fund infrastructure projects by providing federal guarantees that help lower the cost of borrowing and minimize disruptions to the municipal bond market. Also, reinstate the Build America Bonds program, which issued \$181 million on taxable municipal bonds before expiring at the end of 2010.

# Conclusion

When looking back on approximately six dozen interviews conducted throughout the *Ignite* series, most participants and constituent groups are more aligned than apart on what objectives—both short-term and long-term—need to be accomplished if the United States is to once again become the global leader in competitive manufacturing. All participants consistently cited required improvement in tax, energy, trade and regulatory policies; improvement in education; investment in infrastructure (both from a job creation and efficiency perspective); and the establishment of national strategies and goals that spur innovation.

Similar to the business leaders, university presidents, and national laboratory directors interviewed for *Ignite 1.0* and *Ignite 2.0*, the labor leaders participating in this report expressed a level of uncertainty with respect to U.S. manufacturing and the challenges that lie ahead if business leaders, policymakers, educators and labor leaders do not put aside their differences and work together toward a common goal of reinvigorating America's manufacturing industry.

The Council on Competitiveness hopes the *Ignite* series has helped inform all stakeholders on what it will take to improve U.S. manufacturing competitiveness, and further hopes that as a result, all constituents impacted by this important issue come to the table and have ongoing, meaningful and constructive dialogue that results in real action and change.



*Photograph courtesy of The Building and Construction Trades Department, AFL-CIO.*

## U.S. Manufacturing Competitiveness Initiative

### LEADERSHIP COUNCIL

#### Council Board

Samuel R. Allen  
Chairman and CEO  
Deere & Company

Michael R. Splinter  
Chairman, President and CEO  
Applied Materials, Inc.

Shirley Ann Jackson  
President  
Rensselaer Polytechnic Institute

William P. Hite  
General President  
United Association of Plumbers  
and Pipefitters

Charles O. Holliday, Jr.  
Chairman Emeritus  
Council on Competitiveness

Deborah L. Wince-Smith  
President & CEO  
Council on Competitiveness

#### Industry Lead

James H. Quigley  
Senior Partner  
Deloitte LLP

#### Academia Lead

Susan Hockfield  
President  
Massachusetts Institute of Technology

#### National Laboratories Lead

George H. Miller  
Director  
Lawrence Livermore National Laboratory

### STEERING COMMITTEE

A. Paul Alivisatos  
Director  
Lawrence Berkeley National Laboratory

David Arkless  
President  
Global Corporate and Government Affairs  
Manpower, Inc.

Dan E. Arvizu  
Director  
National Renewable Energy Laboratory

Neil Z. Auerbach  
Founder and Managing Partner  
Hudson Clean Energy Partners

Thomas R. Baruch  
Founder and Managing Director  
Baruch Future Ventures, LLC

George Blankenship  
Senior Vice President and President  
Lincoln Electric North America  
The Lincoln Electric Company

Gene D. Block  
Chancellor  
University of California, Los Angeles

William H. Bohnett  
President  
Whitecap Investments LLC

Richard H. Brodhead  
President  
Duke University

Curtis R. Carlson  
President and CEO  
SRI International

Jean-Lou A. Chameau  
President  
California Institute of Technology

Scott E. DePasquale  
Partner  
Braemer Energy Ventures

William W. Destler  
President  
Rochester Institute of Technology

Daniel DiMicco  
Chairman, President and CEO  
Nucor Corporation

Alice P. Gast  
President  
Lehigh University

Pierre L. Gauthier  
President and CEO, U.S. & Canada  
Alstom

E. Gordon Gee  
President  
The Ohio State University

Peter T. Halpin  
Chief Executive Officer  
World Resources Company

Mary Kay Henry  
Internal Executive President  
Service Employees International Union

Paul J. Hommert  
President and Laboratories Director  
Sandia National Laboratories

Eric D. Isaacs  
Director  
Argonne National Laboratory

Richard B. Jarman  
President and CEO  
National Center for Manufacturing Sciences

Linda Katehi  
Chancellor  
University of California, Davis

Steven Knapp  
President  
The George Washington University

Anthony J. Maddaluna  
President  
Global Manufacturing  
Pfizer Inc

Thomas Mason  
Director  
Oak Ridge National Laboratory

William E. McCracken  
Chief Executive Officer  
CA Technologies

John McGlade  
Chairman, President and CEO  
Air Products and Chemicals, Inc.

Mark McGough  
President and CEO  
Ioxus, Inc.

Alan Mulally  
President and Chief Executive Officer  
Ford Motor Company

Keith D. Nosbusch  
Chairman and CEO  
Rockwell Automation

Harris Pastides  
President  
University of South Carolina

G. P. "Bud" Peterson  
President  
Georgia Institute of Technology

James M. Phillips  
Chairman and CEO  
NanoMech Corporation

Luis M. Proenza  
President  
The University of Akron

M. W. Scoggins  
President  
Colorado School of Mines

Mayo A. Shattuck III  
Chairman, President and CEO  
Constellation Energy

Lou Anna K. Simon  
President  
Michigan State University

David J. Skorton  
President  
Cornell University

Jack Stack  
Founder and CEO  
SRC Holdings, Inc.

Samuel L. Stanley  
President  
Stony Brook University

Robert J. Stevens  
Chairman and CEO  
Lockheed Martin Corporation

Erik Straser  
General Partner  
Mohr Davidow Ventures

H. Holden Thorp  
Chancellor  
The University of North Carolina  
at Chapel Hill

James S. Turley  
Chairman and CEO  
Ernst & Young, LLP

David A. Vieau  
President and Chief Executive Officer  
A123 Systems, Inc.

Joseph L. Welch  
Chairman, President and Chief  
Executive Officer  
ITC Holdings Corp.

Keith E. Williams  
President & Chief Executive Officer  
and Trustee  
Underwriters Laboratories Inc.

W. Randolph Woodson  
Chancellor  
North Carolina State University

Paul A. Yarossi  
President  
HNTB Holdings Ltd

Audrey Zibelman  
President and CEO  
Viridity Energy

#### **EXECUTIVE ADVISORS COMMITTEE**

Paul Afonso  
Co-Practice Leader  
Government Law & Strategies Group  
Brown Rudnick

Steven F. Ashby  
Deputy Director for Science and Technology  
Pacific Northwest National Laboratory

Glenn P. Baker  
Director  
Engineering, Technology & Quality Services  
Deere & Company

Robert B. Catell  
Chairman  
Advanced Energy Research  
and Technology Center (AERTC)

William L. Chameides  
Dean  
Nicholas School of the Environment  
Duke University

Sujeet Chand  
Senior Vice President and  
Chief Technology Officer  
Rockwell Automation, Inc.

Admiral Jay Cohen  
Principal  
The Chertoff Group

John Cohen  
Vice President of Government Affairs  
Alstom, Inc.

Will Coleman  
Partner  
Mohr Davidow Ventures

Hall P. Daily  
Director of Government Relations  
California Institute of Technology

Jim Davis  
Vice Provost  
Information Technology & CTO  
University of California, Los Angeles

Jeff DeCarlis  
Executive Vice President  
SRC Holdings Inc.

Joseph M. DeSimone  
Chancellor's Eminent Professor of Chemistry  
University of North Carolina

Denis DesRosiers  
Vice President, Information Technology and  
Chief Information Officer  
ITC Holdings Corp.

Tomás Díaz de la Rubia  
Deputy Director for Science and Technology  
Lawrence Livermore National Laboratory

Patrick V. Farrell  
Provost and Vice President for  
Academic Affairs  
Lehigh University

George J. Fischer  
Executive Vice President and  
Group Executive  
Worldwide Sales and Operations  
CA Technologies

Joseph Flanagan  
Senior Vice President  
Worldwide Operations and Supply Chain  
Applied Materials, Inc.

Jeff Gaynor  
Founder  
American Resilience Consulting, LLC

Craig A. Giffi  
Chairman  
Global Manufacturing Industry  
Deloitte Touche Tohmatsu

Peter T. Halpin  
Chief Executive Officer  
World Resources Company

George Haritos  
Dean  
College of Engineering  
The University of Akron

**Richard H. Herman**  
Former Chancellor  
University of Illinois at Urbana-Champaign

**Gilbert V. Herrera**  
Director  
Microsystems Science, Technology and  
Components  
Sandia National Laboratories

**Thom J. Hodgson**  
James T. Ryan Professor and Director of  
Integrated Manufacturing Systems  
Systems Engineering Institute  
North Carolina State University

**Paul M. Hunt**  
Senior Associate Vice President for Research  
and Graduate Studies  
Michigan State University

**John Irion**  
President  
SC Manufacturing Extension Partnership  
(SCMEP)

**Ray O. Johnson**  
Senior Vice President and Chief Technology  
Officer  
Lockheed Martin Corporation

**Stephen P. Johnson**  
Vice President  
Government and Community Relations  
Cornell University

**Abbott B. Lipsky, Jr.**  
Partner  
Latham & Watkins LLP

**Mark M. Little**  
Senior Vice President and  
Chief Technology Officer of  
GE Global Research  
General Electric Company

**Subhash Mahajan**  
Distinguished Professor and  
Special Adviser to the Chancellor  
University of California, Davis

**Ajay Malshe**  
Executive Vice President and  
Chief Technology Officer  
NanoMech Corporation

**Patrick McFadden**  
Director of Government Affairs  
Nucor Corporation

**Donald R. Medley**  
Head of Federal Government Relations  
Lawrence Berkeley National Laboratory

**Eugene S. Meieran**  
Former Senior Intel Fellow  
Intel Corporation

**Paul R. Michel**  
Chief Judge (Ret.)  
United States Court of Appeals for the  
Federal Circuit

**William Mitchell**  
Vice President  
Business Development  
A123 Systems, Inc.

**Nabil Z. Nasr**  
Assistant Provost and Director  
Golisano Institute for Sustainability and CIMS  
Rochester Institute of Technology

**Kevin M. Nepveux**  
Vice President  
Global Manufacturing Services  
Pfizer Inc

**Allison Newman**  
Assistant Vice President  
Government and Community Relations  
Rensselaer Polytechnic Institute

**Robin L. Newmark**  
Director  
Strategic Energy Analysis Center  
National Renewable Energy Laboratories

**Ziad S. Ojakli**  
Group Vice President  
Government and Community Relations  
Ford Motor Company

**Joe Pietrantonio**  
Vice President  
Global Operations  
Air Products and Chemicals, Inc.

**John Poate**  
Vice President for Research and Technology  
Transfer  
Colorado School of Mines

**Pete K. Rahn**  
National Transportation Practice Leader  
The HNTB Companies

**Aleda V. Roth**  
Burlington Industries Distinguished Professor  
of Supply Chain Management  
Clemson University

**Nigel J. Sutton**  
Director  
International Business Development &  
Operations  
Raytheon International, Inc.

**Alan Taub**  
Vice President  
Global Research & Development  
General Motors Corporation

**Rebecca R. Taylor**  
Senior Vice President  
National Center for  
Manufacturing Sciences

**Terrence Urbanek**  
Assistant to the Director of Training  
United Association of Plumbers and  
Pipefitters

**General Charles F. Wald**  
Director and Senior Advisor  
Aerospace and Defense Industry  
Deloitte Services LP

**Terry Wallace**  
Principal Associate Director for Global  
Security  
Los Alamos National Laboratory

**Ann M. Weeks**  
Vice President  
Government Affairs  
Underwriters Laboratories Inc.

**Chelsea C. White, III**  
Chair  
H. Milton and Carolyn J. Stewart School  
Georgia Institute of Technology

**Kate S. Whitefoot**  
Senior Program Officer  
Design, Manufacturing and Competitiveness  
The National Academy of Engineering

**Jeffrey J. Wilcox**  
Corporate Vice President of Engineering  
Lockheed Martin Corporation

**Thomas Zacharia**  
Deputy Laboratory Director for Science &  
Technology  
Oak Ridge National Laboratory

**John Zysman**  
Professor of Political Science and  
Co-Director  
Berkeley Roundtable on the International  
Economy (BRIE)  
University of California, Berkeley

#### **STAFF**

**Jack McDougle**  
Senior Vice President  
Council on Competitiveness

## Council on Competitiveness Membership

### BOARD

#### Chairman

Samuel R. Allen  
Deere & Company

#### Industry Vice Chairman

Michael R. Splinter  
Applied Materials, Inc.

#### University Vice Chairman

Shirley Ann Jackson  
Rensselaer Polytechnic Institute

#### Labor Vice Chairman

William P. Hite  
United Association of Plumbers and  
Pipefitters

#### Chairman Emeritus

Charles O. Holliday, Jr.  
Bank of America

#### President & CEO

Deborah L. Wince-Smith

#### Treasurer

C. Wm. Booher, Jr.

#### Secretary and Chief of Staff

William C. Bates

### EXECUTIVE COMMITTEE

Thomas R. Baruch  
Baruch Future Ventures, LLC

Gene D. Block  
University of California, Los Angeles

Jean-Lou A. Chameau  
California Institute of Technology

Richard T. Clark  
Merck & Co., Inc.

James K. Clifton  
Gallup, Inc.

Jared L. Cohon  
Carnegie Mellon University

John J. DeGioia  
Georgetown University

Marye Anne Fox  
University of California, San Diego

James Hagedorn  
The Scotts Miracle-Gro Company

Sheryl Handler  
Ab Initio

Walter P. Havenstein  
Science Applications International  
Corporation

Susan Hockfield  
Massachusetts Institute of Technology

Steven Knapp  
The George Washington University

Anthony J. Maddaluna  
Pfizer Inc

John E. McGlade  
Air Products and Chemicals, Inc.

Lee A. McIntire  
CH2M HILL

James M. Phillips  
NanoMech

Dominic J. Pileggi  
Thomas & Betts Corporation

Michael E. Porter  
Harvard University

Luis M. Proenza  
The University of Akron

James H. Quigley  
Deloitte LLP

Robert L. Reynolds  
Putnam Investments

Kenan E. Sahin  
TIAX LLC

Allen L. Sessoms  
University of the District of Columbia

Mayo A. Shattuck III  
Constellation Energy

David E. Shaw  
D.E. Shaw Research

Lou Anna K. Simon  
Michigan State University

William H. Swanson  
Raytheon Company

Lawrence Weber  
W2 Group, Inc.

Randi Weingarten  
American Federation of Teachers, AFL-CIO

Mark G. Yudof  
University of California System—Regents

Robert J. Zimmer  
The University of Chicago

#### Founder

John A. Young  
Hewlett-Packard Company

**GENERAL MEMBERSHIP**

Michael F. Adams  
The University of Georgia

Daniel Akerson  
General Motors Corporation

Robert A. Altenkirch  
New Jersey Institute of Technology

Prakash Ambegaonkar  
Bridging Nations

Joseph E. Aoun  
Northeastern University

Daniel Armbrust  
SEMATECH Inc.

Neil Z. Auerbach  
Hudson Clean Energy

Steven A. Ballmer  
Microsoft Corporation

Sandy K. Baruah  
Detroit Regional Chamber

Dennis D. Berkey  
Worcester Polytechnic Institute

A. Lorris Betz  
Utah State University

Jamshed Bharuca  
The Cooper Union for the Advancement of  
Science and Art

Robert J. Birgeneau  
University of California, Berkeley

George Blankenship  
Lincoln Electric North America

William H. Bohnett  
Whitecap Investments LLC

Lee C. Bollinger  
Columbia University

Molly Corbett Broad  
American Council on Education

Richard H. Brodhead  
Duke University

Robert A. Brown  
Boston University

Roger G. Brown  
University of Tennessee—Chattanooga

David W. Burcham  
Loyola Marymount University

Steve Cardona  
Spartan Ranger Clean Tech Ventures

Curtis R. Carlson  
SRI International

Clarence P. Cazalot Jr.  
Marathon Oil Corporation

Roy A. Church  
Lorain County Community College

Mary Sue Coleman  
University of Michigan

Michael M. Crow  
Arizona State University

Ronald J. Daniels  
The Johns Hopkins University

Scott DePasquale  
Braemar Energy Venture

William W. Destler  
Rochester Institute of Technology

Ernest J. Dianastasis  
CAI

Daniel DiMicco  
Nucor Corporation

Joe DiPietro  
The University of Tennessee

John A. Fry  
Drexel University

Alice P. Gast  
Lehigh University

E. Gordon Gee  
The Ohio State University

Judy Genshaft  
University of South Florida

R. Barbara Gitenstein  
The College of New Jersey

Robert B. Graybill  
Nimbus Services, Inc.

Amy Gutmann  
University of Pennsylvania

Peter T. Halpin  
World Resources Company

Patrick T. Harker  
University of Delaware

Mary Kay Henry  
Service Employees International Union

Catherine Bond Hill  
Vassar College

John C. Hitt  
University of Central Florida

John D. Hofmeister  
JKH Group

Jeffrey R. Immelt  
General Electric Company

Lloyd Jacobs  
University of Toledo

Madeleine S. Jacobs  
American Chemical Society

John I. Jenkins  
University of Notre Dame

Jeffrey A. Joerres  
Manpower Inc.

John P. Johnson  
Embry-Riddle Aeronautical University

Robert Johnson  
Becker College

Linda P.B. Katehi  
University of California, Davis

Jim Yong Kim  
Dartmouth College

Paul G. Kimball  
Sagebrush Capital, LLC

Marcia M. Klawe  
Harvey Mudd College

Ellen J. Kullman  
DuPont

John S. Langford  
Aurora Flight Sciences Corporation

- Lester A. Lefton  
Kent State University
- J. Bernard Machen  
University of Florida
- Sally Mason  
University of Iowa
- David Maxwell  
Drake University
- Jane McAuliffe  
Bryn Mawr College
- William E. McCracken  
CA Technologies
- Mark McGough  
Ioxus, Inc.
- Michael A. McRobbie  
Indiana University
- Alan G. Merten  
George Mason University
- Carolyn Meyers  
Jackson State University
- Paul Michaels  
Mars, Incorporated
- Richard K. Miller  
Franklin W. Olin College of Engineering
- James B. Milliken  
University of Nebraska
- Alan Mulally  
Ford Motor Company
- Mark A. Nordenberg  
University of Pittsburgh
- Keith D. Nosbusch  
Rockwell Automation, Inc.
- Stephen J. Owens  
University of Missouri System
- Eduardo J. Padrón  
Miami Dade College
- Vikram S. Pandit  
Citigroup Inc.
- Daniel S. Papp  
Kennesaw State University
- Harris Pastides  
University of South Carolina
- G.P. "Bud" Peterson  
Georgia Institute of Technology
- William C. Powers, Jr.  
The University of Texas at Austin
- Edward Ray  
Oregon State University
- Rhone Resch  
Solar Energy Industries Association
- Rory Riggs  
Balfour, LLC
- John R. Ryan  
Center for Creative Leadership
- Leonard A. Schlesinger  
Babson College
- M. W. Scoggins  
Colorado School of Mines
- Scott D. Sheffield  
Pioneer Natural Resources Company
- Ruth J. Simmons  
Brown University
- John B. Simpson  
State University of New York at Buffalo
- David J. Skorton  
Cornell University
- Frederick W. Smith  
FedEx Corporation
- Mary S. Spangler  
Houston Community College
- Jack Stack  
SRC Holdings Inc.
- Samuel L. Stanley, Jr.  
Stony Brook University, Southampton
- Susan S. Stautberg  
Partner Com Corporation
- Charles W. Steger  
Virginia Polytechnic Institute and State University
- Robert J. Stevens  
Lockheed Martin Corporation
- Erik Straser  
Mohr Davidow Ventures
- Teresa Sullivan  
University of Virginia
- Andrew C. Taylor  
Enterprise Holdings, Inc.
- H. Holden Thorp  
The University of North Carolina at Chapel Hill
- James S. Turley  
Ernst & Young, LLP
- Tom M. Uhlman  
New Venture Partners LLC
- Steven L. VanAusdle  
Walla Walla Community College
- David Vieau  
A123 Systems, Inc.
- Jeffrey Wadsworth  
Battelle Memorial Institute
- Joseph L. Welch  
ITC Holdings Corp.
- William C. Weldon  
Johnson & Johnson
- Robert A. Wharton  
South Dakota School of Mines & Technology
- Timothy P. White  
University of California, Riverside
- Keith E. Williams  
Underwriters Laboratories Inc.
- W. Randolph Woodson  
North Carolina State University
- Mark S. Wrighton  
Washington University in St. Louis
- Paul A. Yarossi  
HNTB Holdings Ltd.
- Audrey Zibelman  
Viridity Energy, Inc.

## National Affiliates and Council Staff

### INTERNATIONAL AFFILIATES

Pierre L. Gauthier  
Alstom U.S.  
John P. Selldorff  
Legrand North America

### NATIONAL AFFILIATES

AIGA  
American Academy of Arts and Sciences  
American Association for the Advancement of Science  
American Association of Community Colleges  
American Council on Renewable Energy  
American Mathematical Society  
American Society for Engineering Education  
Arizona Technology Council  
Association of American Colleges and Universities  
Association of American Universities  
BITS, Financial Services Roundtable  
Business Leaders for Michigan  
Georgia Research Alliance, Inc.  
IEEE-USA  
International Economic Development Council  
JumpStart Inc  
Junior Achievement USA  
National Center for Manufacturing Sciences  
NorTech  
Oak Ridge Associated Universities

Rothman Institute for Entrepreneurship-FDU  
SMC3  
The Bi-National Sustainability Laboratory  
United Negro College Fund, Inc.  
United States Council for International Business  
U.S. Civilian Research & Development Foundation  
University Economic Development Association

### DISTINGUISHED FELLOWS

The Honorable Erich Bloch  
The Honorable Bart J. Gordon  
The Honorable Daniel S. Goldin  
The Honorable Alexander A. Karsner  
The Honorable Anthony J. Tether

### COUNCIL ON COMPETITIVENESS SENIOR STAFF

William C. Bates  
Chief of Staff  
Frederick M. Bush  
Executive Vice President  
Chad Evans  
Senior Vice President  
Jack McDougale  
Senior Vice President  
Cynthia R. McIntyre  
Senior Vice President  
Mohamed N. Khan  
Vice President  
Christopher Mustain  
Vice President  
Betsy Thurston  
Vice President  
Jennifer Bond  
Senior Advisor  
Amy Kaslow  
Senior Advisor  
Walter L. Kirchner  
Chief Technologist in Residence

## About the Council on Competitiveness

### WHO WE ARE

The Council's mission is to set an action agenda to drive U.S. competitiveness, productivity and leadership in world markets to raise the standard of living of all Americans.

The Council on Competitiveness is the only group of corporate CEOs, university presidents and labor leaders committed to ensuring the future prosperity of all Americans and enhanced U.S. competitiveness in the global economy through the creation of high-value economic activity in the United States.

### Council on Competitiveness

1500 K Street, NW  
Suite 850  
Washington, DC 20005  
T 202-682-4292  
Compete.org

### HOW WE OPERATE

The key to U.S. prosperity in a global economy is to develop the most innovative workforce, educational system and businesses that will maintain the United States' position as the global economic leader.

The Council achieves its mission by:

- Identifying and understanding emerging challenges to competitiveness
- Generating new policy ideas and concepts to shape the competitiveness debate
- Forging public and private partnerships to drive consensus
- Galvanizing stakeholders to translate policy into action and change

**Council on Competitiveness**

1500 K Street, NW, Suite 850, Washington, D.C. 20005 T 202 682 4292

Compete.org



**Compete.**

Council on  
Competitiveness