

# Testimony of Scott Dahl

Regional President North America for Starters & Generators

Robert Bosch LLC



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Hearing on  
Our Nation of Builders:  
Powering U.S. Automobile Manufacturing Forward

Subcommittee on Commerce, Manufacturing and Trade

United State House of Representatives

Wednesday, April 10, 2013

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**Background**

As an international company, Bosch makes thoughtful business decisions on where globally to invest in research, development and manufacturing capacity to meet its customers' needs. One of the most important decision influencers is the business environment. The United States boasts many advantages, especially its innovative, can-do culture and its people. However, the U.S. also raises some concerns from the perspective of its workforce and the need for more individuals with science, technology, engineering and math (STEM) skills. These concerns can be addressed through government policy decisions, as well as increased public-private collaboration, making the U.S. an even stronger global competitor for international investment.

**Key Areas**

**Innovation:** Continued federal investment in advanced technology research, development and demonstration projects, especially projects that facilitate collaboration among the private sector, universities and national laboratories, is vital to keeping the U.S. at the forefront of technological innovation. This is especially important for high-risk, high-reward concepts that can result in game-changing technological advancements that benefit society.

**Training and Education:** This is a critical issue for U.S. competitiveness. The increasingly higher skill levels needed in modern manufacturing require an increased focus by Americans in careers that involve science, technology, engineering and math. This applies to R&D as well as to people operating and maintaining the machinery of a modern manufacturing plant. Federal policies that encourage and support both knowledge and skills development will help the U.S. compete. Support for 2-year technical colleges is especially important for training and retraining today's workforce.

**Regulatory Harmonization:** Efforts to achieve alignment between the U.S. and EU regulatory environments can provide additional development and manufacturing efficiency, with the potential for increased safety and fuel efficiency technologies that benefit the end consumer.

**Economic Clarity:** The U.S. budget and long-term debt debates are very important to the country and to a more predictable economic environment. The current process of seeking resolution leads to uncertainty about the economic climate. Businesses require a certain level of clarity in the country's economic climate in order to make favorable investment decisions.

Chairman Terry, Ranking Member Schakowsky, members of the Committee, thank you for the opportunity to testify before you today and to share Bosch's perspective on this important topic.

I am Scott Dahl, North American Regional President with responsibility for the starters and generators product lines. I am based in Plymouth, Michigan.

Robert Bosch founded our company in 1886, when he opened the "Workshop for Precision Mechanics and Electrical Engineering" in Stuttgart, Germany. Today, Bosch employs more than 300,000 associates across the globe, including 15,000 in the United States.

Bosch has deep roots in the U.S. Our company founder first established an office in New York City in 1906, where he had learned about American ingenuity while serving as an apprentice to Thomas Edison. Bosch presently operates more than 100 manufacturing, engineering and service sites across the country.

Bosch has four business sectors – Automotive Technology, Energy and Building Technology; Consumer Goods; and Industrial Technology. Automotive technology is our largest sector, comprising nearly 60 percent of our business. Our automotive technologies touch almost every part of the vehicle, with specialized business units devoted to vehicle safety, advanced diesel systems, electronics, gasoline systems, hybrid technologies and car multimedia – just to name a few. Together with our customers, we make vehicles safer, cleaner and more economical.

In January of this year, we unveiled our prototype Automated Driving test car to the public, outfitted with Bosch advanced radar sensors and computer algorithms. Many of the high-tech systems and components that support future automated driving will in the near-term help drivers avoid collisions, save fuel and reduce emissions. Innovations like adaptive cruise control improve efficiency and the driving experience by allowing a vehicle to automatically adjust its speed to the flow of traffic.

Predictive emergency braking will reduce the severity and number of crashes in the near future. Engine start-stop systems and high-efficiency alternators – both products that I am responsible for – help improve fuel economy and reduce emissions up to 8 percent and 2 percent respectively. Both systems provide an excellent cost-benefit ratio, as they can be easily integrated into existing systems.

None of these incredible advancements would be possible, however, without strong and sustained investment into innovative products. Research and development (R&D) are at the heart of Bosch's success. Approximately 42,000 Bosch engineers work at 86 locations worldwide. Bosch files 19 patents on average every business day.

One innovation project underway in collaboration with the University of Michigan, AVL, and other partners is something we call ACCESS. This project is 50 percent funded by the Department of Energy Vehicle Technology Program. ACCESS aims to increase the efficiency of a gasoline engine up to 30 percent. Because the US government is supporting this high-risk, high-reward project, Bosch chose to establish its global center of competence for the technology in the U.S. This project is an excellent example of public-private partnerships that can help keep the U.S. at the forefront of innovation.

While the U.S. continues as a world leader in innovation, there is a growing need for workforce development and worker training. To illustrate the challenge facing Bosch and many other manufacturers, I want to highlight the Bosch facilities in South Carolina, where many of our automotive products are made. First the good news: Bosch will have added approximately 450 jobs over 5 years in South Carolina to support the manufacture of products ranging from precision-machined fuel injectors to electronic stability control and engine management systems to hydraulic pumps for mobile construction, mining and heavy industries.

However, there has been a significant struggle to identify and hire skilled workers for these positions. In order to remain a world-class manufacturing nation, we must have skilled workers who are prepared to meet the challenge of modern-day manufacturing.

Bosch recently joined the U.S. Department of Commerce in hosting an economic roundtable at our Charleston, South Carolina plant, and this significant lack of skilled workers was echoed by other employers from the region as well as by several economic development specialists. Our plant managers across the country express the same frustration.

They have worked diligently to attract employees, participating in job fairs and military veteran recruiting events all across the country. Along with our fellow

manufacturers in South Carolina, Bosch has embraced different avenues to address this challenge, including direct engagement with, and support for, local technical colleges and an in-house apprenticeship program.

At one of our plants, we have graduated 308 apprentices in three different curriculums; electrician, mechanic and tool maker. Just last week, we also provided a \$400,000 dollar donation to Greenville Technical College to support its hands-on training program.

While Bosch recognizes that occupational training is part of our social responsibility, the reality is that significant resources are required to hire and train workers who are not prepared to enter the modern manufacturing and engineering workforce. We are willing to do our part, but we need greater flexibility and focus from our nation's education system so K-12 schools can instill the base knowledge, interest and skill set required for jobs in STEM fields. This is vital to keeping the U.S. attractive for investment. In fact, one of the trends Bosch considers in its global investment planning is the growth or shrinkage of student engagement in STEM subjects.

We are pleased to see that some states are starting to pilot programs like Germany's dual education approach. This is a positive step, but we believe it will take a game-changing national effort to meet manufacturers' needs. We also believe that more investment should be made in two-year technical colleges and in creating and fostering apprenticeship programs, based on regional needs throughout the U.S. Bosch would welcome the opportunity to work with all of you and your colleagues on this critical issue.

Looking to the future, Bosch sees many exciting opportunities on the horizon. At the top of the list is the Transatlantic Trade and Investment Partnership. We support this endeavor and believe that it would result in notable benefits for the automotive industry and consumers, particularly in the form of enhanced regulatory harmonization and standardization.

Both the U.S. and the European Union maintain stringent requirements and performance standards for motor vehicles and motor vehicle components. This is particularly true relative to passive and active safety technology and carbon emissions. Significant societal and company operational efficiency benefits could be

accrued from additional regulatory harmonization between the U.S. and the EU. We look forward to engaging with the Committee as the negotiations for the Free Trade Agreement progress.

Finally, I would like to make a comment about the U.S. economic environment. Our North America sales in 2012 increased 8 percent in U.S. dollars over 2011, which underscores the company's investment in manufacturing sites. However, the lack of fiscal policy clarity in Washington is creating economic uncertainty, and that uncertainty impacts future investment plans in U.S. manufacturing. I believe the U.S. stands on the verge of significant growth, and hope our elected representatives are able create an environment conducive to this potential.

Thank you again for the opportunity to speak before the Committee. I welcome any questions you may have.