

Promoting Partnerships for Advanced Manufacturing
November 14, 2007
Indianapolis, Indiana
Joe Loughrey

President & COO, Cummins Inc.

Good morning and thank you, Phyllis, for that very nice introduction.

It is a pleasure to have the opportunity to speak on a topic about which I am passionate - The Future of Manufacturing in America - and also to share my enthusiasm for two terrific programs: Dream It. Do It. and the Manufacturing Skills Standards Council certification program.

As most of you probably know, Cummins has a long history in Indiana. Over the past 88 years, we have grown from a small Columbus-based diesel engine maker to a diversified, global Fortune 250 company that serves customers in more than 150 countries.

Despite our growth – and this year we expect to report sales in the neighborhood of \$13 billion dollars – I am proud to say that Cummins' commitment to our hometown and home state has remained strong.

Today, Cummins is the third-largest Indiana-based company in terms of revenue. Likewise, we are one of the largest private employers in the state with nearly 6,000 full-time employees.

Some of our most high-profile products are made right here in Indiana – including the diesel engine that powers the Dodge Ram heavy-duty pickup truck and which already meets the tough 2010 EPA emissions standard as well as the most sophisticated common rail fuel system for diesel engines anywhere in the world. And our flagship technical center, where we conduct leading-edge research into the technologies that allow us to produce the cleanest diesel engines in the world, is in Columbus.

So, as you can see, we have a big stake in creating an environment where manufacturing can thrive in Indiana. And that stake has increased in the past year with our decision to locate our new and exciting light-duty diesel engine program in Columbus.

LDD, as we call it, opens a whole new – and potentially very large – market to Cummins. Perhaps more importantly to many in this room and across Indiana, it also promises to bring 600 or more new jobs to the state over the next few years.

And make no mistake; these are good jobs offering competitive wages and comprehensive benefits. They also are the kind of jobs that require workers skilled in advanced manufacturing tools and techniques, who also can communicate well and are prepared to work in self-directed teams.

This brings me to one of the biggest challenges facing Cummins and all manufacturers today: How to overcome the shortage of skilled workers interested in making a career in advanced manufacturing.

Despite the popular perception that the United States has outsourced much of its manufacturing to low-cost countries such as Mexico and China, the truth is manufacturing is enjoying a decades-long boom in this country.

Manufacturing output has increased nationwide by 3.7 percent a year over the last 50 years for a total increase of 700 percent. In Indiana, manufacturing output grew 25 percent from 2001-2006 alone.

This is a WOW! This increase in output is primarily due to strong growth in productivity and much of this is the result of American innovation. What took 1,000 workers to manufacture in 1950 required only 199 workers to produce in 2005.

This is not a new story for Americans. Early in the 20th Century, it took two American farmers to produce food for five people. Today, because of technology, a single farmer can feed more than 130 people.

There is simply too much talk about preserving individual jobs and not enough effort to improve innovation, productivity and skills. Ironically, despite the impact productivity has had on manufacturing employment, the shortage of skilled workers threatens the sector's future success. If we do nothing, that gap is only going to widen in the coming years as aging baby boomers retire.

We see it every day in every location where we have manufacturing operations. We struggle to find skilled repair workers, technicians, machinists and other key front-line personnel necessary to help us meet the growing demands for our products.

These are challenging jobs that require skills beyond those taught in high school, and which can offer significant rewards.

And Cummins is not alone. The Bureau of Labor Statistics estimates that the U.S. will face a skilled worker shortage of 8 million people by 2010, with that number growing to 14 million in 2020.

The National Association of Manufacturers, or NAM, recently polled its members on a number of employment-related topics and unearthed some sobering facts:

90 percent of those polled said they have trouble finding qualified workers. 83 percent said worker shortages were affecting their ability to serve customers. Three-quarters said building a high performance workforce is the most important driver to future business success. And half said they have left jobs unfilled because they could not find qualified people to do the work.

Consider those statistics for just a moment.

And now consider this: No state in the country is more reliant on a strong manufacturing base than Indiana.

According to the U.S. Bureau of Economic Analysis, manufacturing businesses in Indiana produced \$70 billion dollars worth of goods last year - 28 percent of the state's Gross Domestic Product. That's highest percentage of any state in the U.S.

Indiana ranks seventh in the number of manufacturing workers, even though we rank only 14th in total population. And the average manufacturing worker in Indiana earned just under \$50,000 dollars last year – well above the state average of \$36,500 dollars. The wage gap between manufacturing and non-manufacturing jobs is among the highest in the nation.

As you can see, manufacturing is a strong, vital and growing component of the state's economy. We have seen plenty of evidence of that just in the past 18 months with the decision by Honda to build an auto assembly plant in Greensburg that will employ at least 2,000, and in our decision to locate the light-duty diesel program at our Columbus Engine Plant.

Still, that growth will be threatened if we don't do a better job of attracting and preparing young people for careers in advanced manufacturing.

Too often, today's high school students view manufacturing the way their parents or grandparents did and not for the hotbed of innovation and entrepreneurship it has become.

In fact, counselors and parents too often tell their children that a 4-year college degree is the only way to go. Yet, less than one-third of college students in the U.S. graduate in six years or less. That means as many as 2 out of every 3 high school seniors fretting over college decisions today could be headed in a direction that's not right for them.

A new report "America's Forgotten Middle-Skill Jobs" by economists at Georgetown and American Universities and the Urban Institute found that so-called "middle-skill" employment offers ample and well-paying opportunities for

U.S. workers that have been overlooked in a push to encourage more students toward 4-year college degrees. In fact, today – and until at least 2015 – 45 percent of our country’s job openings will fall in the category of middle-skill occupations.

For many students technical and vocational education can offer an attractive alternative to a four-year college degree by providing the training necessary to enter a challenging, well-paying career in advanced manufacturing.

That’s why I am so excited by recent efforts in Indiana to bring together all the key stakeholders – business, education, government and community organizations – to address this critical issue.

I received a first-hand introduction to the power of such collaboration during the site selection process for our LDD program. Indiana was just one of several states that worked hard to land the business – and in purely economic terms many of the offers we received were stronger than what Indiana could do.

Where Indiana stood head and shoulders above the crowd was in the array of creative education incentives aimed at strengthening the quality and quantity of technical education opportunities across southern Indiana.

The state worked with Ivy Tech, Purdue, IU, the Region 9 Workforce Board and other community stakeholders to make a commitment that other states simply couldn’t match. In the end, that commitment played a pivotal role in our decision to expand our presence in Indiana.

One of the most exciting aspects of the educational package put together as part of the LDD program was the money set aside to bring the Dream It. Do It. program to Region 9, which covers a 10-county area in southeastern Indiana.

Dream It. Do It. was launched four years ago in Kansas City by NAM in cooperation with schools, businesses and community groups in the region. The program has a number of goals aimed at raising technical literacy and increasing the number of young people interested in advanced manufacturing. Those goals include:

Raising awareness among middle and high school students that manufacturing is rewarding, exciting and challenging work.

Working with high schools and community colleges to develop curricula that bridges the gap between what is taught in schools today and what students will need to enter an advanced manufacturing setting.

Letting students know that there is good money to be made – and lifetime careers to be created – in manufacturing.

The program in Kansas City has shown some promising early results – most notably a significant increase in the number of students enrolling in technical and vocational courses. Dream It. Do It. programs are also underway in Virginia, Washington, Texas, Nebraska, Ohio, Arizona, Missouri, Illinois – and I am proud to say, Indiana.

I have to confess that I have a special fondness for Dream It. Do It. because of my role as Chairman of the Board of the Manufacturing Institute, the educational arm of NAM, which has developed the program.

I have witnessed first-hand the hard and thoughtful work that has gone into getting Dream It. Do It. off the ground, and am extremely optimistic about what it can do to help close the manufacturing skills gap in Indiana.

I also am proud that Cummins has been able to play a role in getting Dream It. Do It. started in Indiana.

One of our core beliefs at Cummins is that the Company is only as strong as the communities in which it operates. Dream It. Do It. has the potential to improve lives by broadening educational offerings and opening young people's eyes to the tremendous career opportunities that await them right here in Indiana.

I was fortunate to be on hand at the official Dream It. Do It. kickoff held in May at the Columbus Learning Center. The event drew Gov. Mitch Daniels, senior leaders from the Manufacturing Institute and nearly 300 guests from around the region. Some of you may have been there.

So far, nearly \$3 million dollars has been raised to fund Dream It. Do It. activities in southern Indiana. That money will train 700 current and future workers in key techniques needed to be successful in manufacturing; fund technical education infrastructure improvements across the region and help with awareness-raising efforts.

One of the primary goals of the program is to significantly increase student enrollment in secondary and post-secondary education that helps prepare students for manufacturing careers.

To be specific, Dream It. Do It. has set its sights on a 25 percent increase in such enrollment by the 2009-2010 school year.

It's an ambitious agenda and it has been a busy few months for the folks running the Dream It. Do It. program in southeastern Indiana. Among the work done so far are a number of awareness-raising activities, including:

Holding 40 focus group meetings and presentations

Placing billboards in every county in Region 9

And scheduling 5,000 radio, 12,000 television and 500 movie theater commercials to run over the first year of the program

With the start of the school year in September, the program also began tracking career awareness among students in southeast Indiana. By the end of December, it expects to have held as many as 20 events – attracting 10,000 people – to promote careers, jobs or college attendance.

Some tangible results of the Dream It. Do It. program can already be seen:

The program has begun to identify best practices in education and training across the region, so that it can leverage the good work already being done. The program's leaders are reaching out to the manufacturing community for help in designing future curriculum and in providing opportunities for teachers to visit manufacturing plants so they can share their experiences with students. Learning Centers have been identified in each county in Region 9. These centers provide places for GED exams, college classes and adult education courses to be held.

As you can tell, I get excited just talking about the potential for Dream It. Do It. I truly believe this program can not only strengthen businesses such as Cummins, but also elevate our communities and improve the standard of living for thousands of students coming out of high school in the years to come.

Still, no one single program or initiative can carry the load when it comes to closing the skills gap we face in manufacturing today.

It is going to take the type of collaboration we already have seen on the part of business, government, the educational community, unions and others. It is going to require creative thinkers who aren't afraid to take a few calculated risks and who are working toward a common goal.

In Region 9, we are trying to lead the way in Indiana. We have set a goal to create a regional system of lifelong learning that connects the residents of southeast Indiana to better economic opportunities through education by 2015.

We are calling our effort 'EcO 15' and the strategy is to "connect the dots" by bringing together educational institutions, economic development groups, workforce development, manufacturing companies, local elected officials and community-based organizations in the 10 counties to build this lifelong learning system.

While advanced manufacturing isn't the only area addressed in their effort, the primary component of EcO 15 is the creation of a Dream It. Do It. "hub and node"

advanced manufacturing education network in the 10 counties. Everyone is working together to raise the money necessary to make all of this happen.

We hope this effort can become a model for other areas of the state and even the rest of the nation. In fact, a new organization called CONEXUS INDIANA has signed a license agreement to implement Dream It. Do It. Across the state, CONEXUS will build on what is being learned in Region 9 to better position Indiana to become a global leader in advanced manufacturing and logistics. As Chairman of CONEXUS INDIANA, I am working with its full-time president Carol D'Amico to ensure that learnings and collaborative efforts are spread across the state.

I know we have many educators in the room today, so I didn't want to use all my time this morning without spending a few moments to applaud the State Board of Education for making an important commitment to advancing technical education at the high school level across the state.

I'm talking about the Board's recent decision to authorize schools across Indiana to begin offering the four-course advanced manufacturing curriculum designed by the Manufacturing Skills Standards Council beginning with the 2008-2009 school year. This is being integrated into the Region 9 effort.

The curriculum -- currently taught almost exclusively to adults already in the workforce -- prepares its students to take the MSSC certification examination. Manufacturers value the certification because it signals that potential employees have been grounded in the basic principles of quality, safety, maintenance and manufacturing processes.

In other words, it's part of the educational package that employers increasingly are seeking from advanced manufacturing workers today.

Currently, only California and Texas offer the MSSC certification courses at the high school level, so the Board of Education's decision puts Indiana at the leading edge of this educational movement. And, as is often the case among those leading the charge, I understand there is some concern over whether this is the right course of action.

I can't answer the question of whether every high school student will be ready to handle the material in the MSSC courses or whether it makes sense for a specific school district to offer the courses.

But I can tell you that Cummins strongly supports the initiative for a number of reasons:

The MSSC approach creates a standard framework for learning these key concepts. Employers know what they are getting from a student that has earned the MSSC certification.

The program is another way to light the fire under students who may be interested in a career in manufacturing – or who may not even be aware of the options available in manufacturing.

And the statewide reach of Ivy Tech Community College, where the classes will be taught, makes the program available to the broadest possible student population.

Manufacturers such as Cummins have confidence in the MSSC certification process. So much confidence, in fact, that as Cummins re-designs its recruiting and hiring process we will integrate the MSSC program and certification exam as a key part of our hiring criteria. Having this certification will make a difference for the candidate.

I encourage all the educators in the room to seriously explore the option of bringing the MSSC certification courses to your district.

In my 34 years at Cummins, I have witnessed the tremendous growth not only of our Company but of the communities around the state, country and world in which we operate.

Much of that growth can be attributed to the hard work done every day by the thousands of employees at manufacturers that produce the goods that keep our economy rolling. There is no disputing that the American manufacturing sector remains the most productive and technologically sophisticated in the world.

Despite this, too many Americans have written off manufacturing in this country because of the headlines outsourcing and off shoring get these days.

Many don't believe that manufacturing in this country can be competitive and they have turned their attention elsewhere. I believe -- but I am not naïve about the challenges manufacturing faces in America.

Dealing with these challenges will take more thoughtful effort and hard work to ensure we keep our edge:

Government, business and the academic sector must work together to do more basic product and process R&D than is done today.

The country desperately needs immigration reform to enable us to attract and retain talent born outside the U.S. as we have historically done.

As a country, we must deal with high structural costs in the U.S. that put us at a competitive disadvantage – I'm talking about costs such as health care, the

corporate tax rate, tort costs and natural gas costs relative to our trading partners.

Companies need to move aggressively to apply best practices that eliminate waste, reduce variation and standardize routine processes so that safety, delivery, cost and quality all get better.

At the local level, such as in Region 9, we need more collaborative efforts to create attractive places for manufacturing to flourish.

We need educational institutions to improve math and science curriculums while aiming their programs more squarely at the needs of their communities. Likewise, we need to support organizations such as the Indiana State Board of Education and its decision to create an Advanced Manufacturing curriculum in high schools starting in 2008.

Finally, all of us need to do a better job of communicating:
The importance of manufacturing to the U.S. economy.
The terrific opportunities available in manufacturing for young people
And the need for community-based efforts to bring everyone together to make it all happen.

If we can do these things, I am extremely bullish about the future of advanced manufacturing in the United States. And I am especially excited about the prospects for manufacturing in Indiana.

Conferences such as this one, initiatives such as Dream It. Do It. and the MSSC certification program, community-based efforts like those going on in Region 9 and the creation of CONEXUS INDIANA are important steps along our journey.

I want to thank the state Department of Education, Ivy Tech, the MSSC and the Indiana Association for Career and Technical Education Districts for hosting today's conference – and all of you for your attention this morning.

Thanks again.