EXPANDING OPTIONS FOR EMPLOYERS AND WORKERS THROUGH EARN-AND-LEARN OPPORTUNITIES

HEARING

BEFORE THE

SUBCOMMITTEE ON HIGHER EDUCATION AND WORKFORCE DEVELOPMENT

COMMITTEE ON EDUCATION AND THE WORKFORCE

U.S. HOUSE OF REPRESENTATIVES

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C O N T E N T S

EXPANDING OPTIONS FOR EMPLOYERS AND WORKERS THROUGH EARN-AND-LEARN OPPORTUNITIES

Wednesday, July 26, 2017
House of Representatives,
Subcommittee on Higher Education and Workforce Development,
Committee on Education and the Workforce,
Washington, D.C.

The subcommittee met, pursuant to call, at 10:07 a.m., in Room 2175, Rayburn House Office Building, Hon. Brett Guthrie [chairman of the subcommittee] presiding.

Present: Representatives Guthrie, Messer, Byrne, Grothman, Stefanik, Allen, Lewis, Mitchell, Smucker, Estes, Davis, Courtney, Adams, DeSaulnier, Krishnamoorthi, Polis, Takano, and Espaillat.

Also Present: Representative Foxx, Scott, and Norcross.

Staff Present: Caitlin Burke, Legislative Assistant; Courtney Butcher, Director of Member Services and Coalitions; Michael Comer, Press Secretary; Amy Raaf Jones, Director of Education and Human Resources Policy; Nancy Locke, Chief Clerk; James Mullen, Director of Information Technology; Krisann Pearce, General Counsel; Alexandra Pena, Staff Assistant; James Redstone, Professional Staff Member; Mandy Schaumburg, Education Deputy Director and Senior Counsel; Michael Woeste, Press Secretary; Tylease Alli, Minority Clerk/Intern and Fellow Coordinator; Austin Barbera, Minority Press Assistant; Denise Forte, Minority Staff Director; Mishawn Freeman, Minority Staff Assistant; Eunice Ikene, Minority Labor Policy Advisor; Richard Miller, Minority Senior Labor Policy Advisor; Udochi Onwubiko, Minority Labor Policy Counsel; Alexander Payne, Minority Education Policy Advisor; Veronique Pluviose, Minority General Counsel; and Erin Robinson, Minority Policy Fellow.

Chairman GUTHRIE. We will bring the committee to order. A quorum being present, the Subcommittee on Higher Education and Workforce Development will come to order.

Good morning and welcome to today's subcommittee hearing. I would like to thank our panel of witnesses and our members for joining today's important discussion on apprenticeships, an opportunity for us to grow our Nation's workforce.

I would especially like to welcome Ms. Stacey Hughes, a constituent of mine who lives not even a mile away, who serves as the

State chair of the Kentucky Federation for Advanced Manufacturing Education, or Kentucky FAME; and Mr. Robert, or Robbie Peglow, a student, a Kentucky student, participating in Kentucky FAME. I look forward to hearing from you about how Kentucky is working to have young people get the skills they need to obtain good-paying jobs.

Every day, hardworking Americans search for a good-paying job that will lead them to a successful career. Many Americans find a pathway to a good-paying job through apprenticeship programs that provide real earn-and-learn opportunities that often turn into careers.

For workers, apprenticeships are a chance to prepare for today's high-skilled, in-demand jobs alongside long-time industry professionals. In fact, based on the National Household Education Survey, an estimated 2.1 million Americans participated in apprenticeships last year.

Employers also see apprenticeships as an outlet to invest in work-based learning programs that attract and help to retain highly qualified employees. And many have seen the results in the form of increased productivity and greater innovation. Our hearing today will explore how apprenticeship-style programs promote workforce development while also looking at Federal programs that are in need of improvement.

One aspect of apprenticeships where this committee sees room for improvement in order to help workers and employers is registered apprenticeships. Currently, registered apprenticeships are programs officially registered with the Department of Labor's Office of Apprenticeship or State office of apprenticeships.

The Department of Labor has issued regulations requiring that registered apprenticeships meet 26 specific requirements relating to program design. DOL regulations also require that these programs adhere to equal employment opportunity regulations that are specific to apprenticeships. While the Department continues to regulate the registered apprenticeship program, workers and businesses are not convinced this program is something that is best for workforce development.

In 2016, only 206,000 individuals nationwide became apprentices through the Registered Apprenticeship Program. Further, less than half of the earn-and-learn programs choose to register their programs with the Department of Labor. The Registered Apprenticeship Program is yet another one-size-fits-all approach that works better for Washington than it does for businesses and students who wish to use apprenticeships as a way to grow our workforce.

Rather than doubling down on the failed attempts of previous administrations to expand the registered apprenticeship program, this committee is looking for a better way to build on the successful efforts businesses have found to grow their own apprenticeship programs outside of the registered apprenticeship program.

It should be noted that any effort to promote apprenticeship opportunities needs to provide employees and job creators with the flexibility to innovative and develop high-quality earn-and-learn programs without the burdens of Washington overreach.

This has been the approach of the committee in our many efforts to strengthen workforce development this Congress and will con-

tinue to be our approach for the future. Today's hearing is part of the House Committee on Education and the Workforce's ongoing efforts to strengthen our workforce for the future, and it is even more important in the realm of apprenticeships now that the White House has taken note of the true success apprenticeship programs are having for workers and employers alike.

I look forward to hearing from our witnesses today on how they have been able to create their own innovative apprenticeship programs and how we can strengthen these efforts to help close the skills gap that exists in our country.

I now yield to the subcommittee's ranking member, Susan Davis, for her opening remarks.

[The statement of Chairman Guthrie follows:]

Prepared Statement of Hon. Brett Guthrie, Chairman, Subcommittee on Higher Education and Workforce Development

Good morning, and welcome to today's subcommittee hearing. I'd like to thank our panel of witnesses and our members for joining today's important discussion on apprenticeships and opportunities for us to grow our nation's workforce. I'd especially like to welcome Ms. Stacey Hughes, a constituent of mine who serves as the state chair of the Kentucky Federation for Advanced Manufacturing Education, or KYFAME, and Mr. Robert Peglow, a Kentucky student participating in KYFAME. I look forward to hearing from you about how Kentucky is working to help young people get the skills they need to obtain good-paying jobs.

Every day hardworking Americans search for a good-paying job that will lead them to a successful career. Many Americans find a pathway to a good-paying job through apprenticeship programs that provide real earn-and-learn opportunities that often turn into careers.

For workers, apprenticeships are a chance to prepare for today's high-skilled, in-demand jobs alongside long-time industry professionals. In fact, based on the National Household Education Survey, an estimated 2.1 million Americans participated in apprenticeships last year.

Employers also see apprenticeships as an outlet to invest in work-based learning programs that attract and help to retain highly qualified employees, and many have seen the results in the form of increased productivity and greater innovation.

Our hearing today will explore how apprenticeship-style programs promote workforce development, while also looking at federal programs that are in need of improvement.

One aspect of apprenticeships where this committee sees room for improvement in order to help workers and employers is "registered" apprenticeships.

Currently, registered apprenticeships are programs officially "registered" with the Department of Labor's Office of Apprenticeship (OA) or a state office of apprenticeship.

The Department of Labor has issued regulations requiring that registered apprenticeships meet twenty-six specific requirements relating to program design. DOL regulations also require that these programs adhere to equal employment opportunity regulations that are specific to apprenticeships.

While the department continues to regulate the registered apprenticeship program, workers and businesses are not convinced this program is something that is best for workforce development.

In 2016, only 206,000 individuals nationwide became apprentices through the registered apprenticeship program. Further, less than half of earn-and-learn programs choose to register their programs with the Department of Labor.

The registered apprenticeship program is yet another one-size-fits-all approach that works better for Washington than it does for businesses and students who wish to use apprenticeships as a way to grow our workforce.

Rather than doubling down on the failed attempts of previous administrations to expand the registered apprenticeship program, this committee is looking for a better way to build on the successful efforts businesses have found to grow their own apprenticeship programs outside of the registered apprenticeships program.

It should be noted that any effort to promote apprenticeship opportunities needs to provide employees and job creators with the flexibility to innovate and develop high quality earn-and-learn programs without the burdens of Washington overreach.

This has been the approach of the committee in our many efforts to strengthen workforce development this Congress, and it will continue to be our approach for the future.

Today's hearing is part of the House Committee on Education and the Workforce's ongoing efforts to strengthen our workforce for the future, and it is even more important in the realm of apprenticeships now that the White House has taken note of the true success apprenticeship programs are having for workers and employers alike.

I look forward to hearing from our witnesses today on how they have been able to create their own innovative apprenticeship programs, and how we can strengthen these efforts to help close the skills gap that exists in our country.

Mrs. DAVIS. Thank you, Mr. Chairman, and I am very pleased that we are here today to discuss successful earn-and-learn programs. As this committee looks to help build a highly skilled workforce and close the skills gap that we so often hear about, we must look at effective models to expand. We know that these models are not new, and in fact, apprenticeships have been training students for quality high-paying jobs for decades.

Programs like The Apprentice School, which we will hear from today, integrate on-the-job training with related classroom instruction, and they also work with local community colleges to build and develop curriculum that allows apprenticeships to have stackable, transferable credentials and allows them to transition into other higher education pathways. These programs also work to educate teachers, families, and young people about the benefits of registered apprenticeships.

I am interested in hearing how we can build on the successes of these programs to make registered apprenticeships, apprenticeships more exciting for young people. We often hear from students that they are looking for more flexible education options to meet their busy schedules, and we need to answer this call and make quality apprenticeships a viable option for all students. Apprenticeships must be prestigious enough to attract students who seek the most challenging and aspirational programs. Parents want to know that their children are receiving a quality education that will yield a widely recognized credential.

As we will hear today, apprenticeships are not the only successful earn-and-learn model. However, if taxpayers are going to invest in these important programs, there must be accountability for students and their families.

I look forward to working with my colleagues on this committee to expand upon the registration process for apprenticeships while ensuring that protections remain in place for students. We will want to make sure that we don't just dismantle programs. What we need to be doing is be sure that the protections are there, because, otherwise, I think we really do a disservice to our students and what their expectations are.

I also believe that we can make apprenticeships more appealing by expanding them beyond the traditional trades. We would like to see companies build upon the phenomenal work that the building trades have done to open up apprenticeships in new industries. Just this year, Amazon announced it was starting a registered apprenticeship program for veterans in its IT cloud computing space. And Microsoft has recently announced one as well. This, I believe,

is a key to how we expand apprenticeships in the U.S. It has to work for those businesses.

By recognizing and rewarding companies who develop successful programs, we can incentivize more industries to expand apprenticeships across the country. And we know that we have to engage with all of our partners in this effort, whether it is learning from the important work that unions have done in this space, asking businesses to continue engaging with the Department of Labor's Office of Apprenticeships, or looking to schools and nonprofit organizations to develop meaningful curriculum for apprentices. We know that this must be a collaborative process.

Last week, in a disappointing maneuver, the Labor, Health and Human Services bill eliminated Federal dollars for apprenticeship programs and called on the authorizers to pass an authorization bill. These dollars in the past were used to promote diversity and support intermediaries so that small businesses can benefit from apprenticeships. So, if that is the case, let's give the appropriators clarity in the form of an authorization. I know that we have a number of Members, some in this committee and some having been on the committee, who have been developing important pieces of legislation. Let's take a look at that and let's perhaps use that as a jumping off point for doing an authorization. I know, through my conversations with members of this committee, that apprenticeships have great support, and I am delighted to see that. I hope we can come together in a bipartisan manner to promote registered apprenticeship programs.

Thank you very much, Mr. Chairman.

[The statement of Mrs. Davis follows:]

Prepared Statement of Hon. Susan A. Davis, Ranking Member, Subcommittee on Higher Education and Workforce Development

I am thrilled that we are here today to discuss successful earn-and-learn programs. As this Committee looks to help build a highly skilled workforce and close the skills gap that we so often hear about, we must look at effective models to expand. We know that these models are not new. In fact, registered apprenticeships have been training students for quality, high-paying jobs for decades.

Programs like The Apprentice School, which we'll hear from today, integrate on-the-job training with related classroom instruction. They also work with local community colleges to build and develop curriculum that allows apprentices to have stackable, transferable credentials and allow them to transition into other higher education pathways. These programs also work to educate teachers, families and young people about the benefits of registered apprenticeships.

I am interested in hearing how we can build on the successes of these programs to make registered apprenticeships more exciting for young people. We often hear from students that they're looking for more flexible education options to meet their busy schedules. We need to answer this call and make quality apprenticeships a viable option for all students.

Apprenticeships must be prestigious enough to attract students who seek the most challenging and aspirational programs. Parents want to know that their children are receiving a quality education that will yield a widely recognized credential.

As we'll hear today, apprenticeships are not the only successful earn and learn model. However, if taxpayers are going to invest in these important programs, there must be accountability for students and their families.

I look forward to working with my colleagues on this committee to expand upon the registration process for apprenticeships, while ensuring that protections remain in place for students. If our only goal is to dismantle protections for students, then we are doing them a great disservice.

I also believe that we can make apprenticeships more appealing by expanding them beyond the traditional trades. We'd like to see companies build upon the phe-

nomenal work that the building trades have done to open up apprenticeships in new industries.

Just this year Amazon announced it was starting a registered apprenticeship program for veterans in its IT cloud computing space. And Microsoft has recently announced one as well. This, I believe, is the key to how we expand apprenticeships in the US.

By recognizing and rewarding companies who develop successful programs, we can incentivize more industries to expand apprenticeships across the country.

And we know that we have to engage with all of our partners in this effort. Whether it is learning from the important work that unions have done in this space, asking businesses to continue engaging with the Department of Labor's Office of Apprenticeships, or looking to schools and nonprofit organizations to develop meaningful curriculum for apprentices, we know that this must be a collaborative process.

Last week, in a disappointing maneuver, the Labor, Health and Human Services bill eliminated federal dollars for apprenticeship programs and called on the authorizers to pass an authorization bill. These dollars in the past were used to promote diversity and support intermediaries so that small businesses can benefit from apprenticeships.

If that's the case, let's give the appropriators clarity in the form of an authorization. I know that Ranking Member Scott, myself, and most of the Democrats on this committee support Rep. Pocan's LEARNs act and are willing to have a markup on it tomorrow, if the Chair would schedule it.

I know through my conversations with Members of this Committee that apprenticeships have great support. I hope we can come together in a bipartisan manner to promote registered apprenticeship programs.

Chairman GUTHRIE. Thank you for yielding back, and I do believe we can move forward in a good manner. I appreciate that.

Pursuant to committee rule 7(c), all members will be permitted to submit written statements to be included in the permanent hearing record.

And, without objection, the hearing record will remain open for 14 days to allow such statements and other extraneous material referenced during the hearing to be submitted for the official hearing record.

I will now introduce our witnesses for this morning's hearings.

Mr. Mike Bennett is the vice president of Cianbro Companies and is testifying on behalf of the Associated Builders and Contractors.

Mr. Robbie Peglow is an apprenticeship student testifying on behalf of Kentucky Federation for Advanced Manufacturing Education or Kentucky FAME.

I will now recognize Ranking Member Scott to introduce our next witness.

Mr. SCOTT. Thank you, Mr. Chairman.

Mr. Chairman, our next witness is Bob Hogan, who is Vice President of Manufacturing and Material Distribution from Newport News Shipbuilding. He is on the Board of Directors of the Commonwealth Center for Advanced Manufacturing and the Virginia Manufacturing Association, where he recently served as chairman. He is active in the American Welding Society, Society for Manufacturing Engineers, and the Association for Manufacturing Excellence.

He knows about apprenticeship programs because he is, in fact, a graduate of the Newport News Shipbuilding Apprentice School, and he will describe the school, I am sure, as the best in the Nation. It is really the gold standard for apprenticeship programs. So we welcome him here and thank you for the opportunity to introduce him.

Chairman GUTHRIE. Thank you.

Thank you, Mr. Ranking member.

And, also, now I would like to introduce Ms. Stacey Johnson Hughes as the State chair of Kentucky Federation for Advanced Manufacturing Education, a good friend and a neighbor.

We appreciate you being here.

And, also, her employer is one of our great local employers, which is Logan Aluminum. So we appreciate that.

I will now ask the witnesses to raise your right hands.

[Witnesses sworn.]

Chairman GUTHRIE. Let the record reflect the witnesses answered in the affirmative. Before I recognize you to provide you for your testimony, let me briefly explain the lighting system. Each of you will have 5 minutes to present your testimony. When you begin, the light in front of you will turn green. When 1 minute is left, the light will turn yellow. When your time is expired, the light will turn red. At that point, I will ask that you wrap up your remarks as best as you're able.

Members will each have 5 minutes to ask you questions following your opening statements, and I will recognize the witnesses in order.

And, first, Mr. Bennett, you're recognized for 5 minutes for your opening statement.

STATEMENT OF MIKE BENNETT, VICE PRESIDENT, CIANBRO, PITTSFIELD, MAINE

Mr. BENNETT. Good morning, Chairman Guthrie, Ranking Member Davis, Chairwoman Foxx, and members of the Subcommittee on Higher Education and Workforce Development.

Let me begin by thanking each of you for this opportunity to testify before you today on how to expand opportunities for Americans through workforce development and the earn-and-learn model. Again, my name is Michael Bennett. I am the vice president of the Cianbro Companies based out of Pittsfield, Maine. I have been with the organization for 21 years, and today I'm here to testify on behalf of Associated Builders and Contractors.

As an employee/owner of Cianbro, I'm pleased to share with you that Cianbro is one of the United States' largest, most diversified, open shop, 100 percent employee-owned, construction companies. We operate in 41 States, and we employ more than 4,000 team members, managing and self-performing heavy civil, structural, mechanical, electrical, steel fabrication and coating work. We are recognized nationally in pursuing health and wellness in the workplace with such distinctions as the healthiest and safest company in America, and that was awarded by the American College of Occupational and Environmental Medicine.

And while I would love to continue to talk about the company that I'm so proud of during this testimony this morning, that's really not why I'm here. I'm here to talk about the skills gap and the workforce shortage or, on a more macro level, developing the next generation of skilled workers, craft professionals, in a way that promotes safety, continual learning, and career development.

Right now, in our industry, there are approximately 500,000 skilled construction jobs available with modest economic growth

and the potential of a $1 trillion infrastructure bill, that number could balloon to 1 million by 2020, which is less than 3 years away. To fill these jobs, we must have safe and efficient workers. To do this, we must have flexibility. Our clients are sophisticated. Our workforce development models must evolve to meet these demands.

At Associated Builders and Contractors, as with Cianbro, we support all workforce programs that develop people and help them reach their potential, whether they're defined by the government or driven by industry. And we call this an all-of-the-above approach to educating the construction professionals.

I have listed some improvements in my written testimony, but I wanted to share a few of those verbally with you today as we develop the strategy it needs to include creating multiple pathways for apprenticeships by acknowledging industry-recognized programs as we do registered apprenticeship programs.

We need to establish reciprocity across Federal and State apprenticeship councils. We need to allow for the utilization of nationally recognized portable industry credentialing programs with third-party oversight. The programs must be industry- and market-driven and flexible in structure, scheduling, and duration to address the changes with an industry's means, methods, and technology.

Programs should be competency-based, allowing those who quickly master a skill to progress quicker than those who may require more time. And we need to allow for targeted programs to be developed. Competencies evolve quickly. With the changing business demands, an employee should be able to build those targeted competencies for those demand positions to meet our clients' needs.

Why does Cianbro value industry-recognized programs? Because they work. Industry-recognized programs come in all shapes and sizes, and that is the beauty of them. They provide the highest level of flexibility that benefits the worker, their company, and their client. Industry-recognized programs give the entire American public an opportunity to learn a skill, develop themselves, and build their careers.

I'm not here today to criticize registered apprenticeship programs; rather, I'm here to urge you as lawmakers to support our industry by encouraging an all-of-the-above approach in filling the skills gap. This is why the construction industry is so excited about President Trump's executive order to expand on the apprenticeship opportunities for all Americans. By encouraging industry-recognized programs and embracing an all-of-the-above approach to workforce development, the President's executive order shows a commitment to innovation and embracing the methods that work.

And, in closing, I would like to leave you with these sentiments: Every day, I am thankful for the skilled craft professionals who provide me with the creature comforts we all enjoy: a warm and dry home, power, safe roads, reliable transportation. As a society, we highly value our doctors, our lawyers, our dentists, but sometimes we take for granted our other professionals. Our country requires and deserves to have the best of the best at all levels of these professions. So, as we work together to enhance the quality and quantity of our skilled vocations in this country, I offer you ABC's support in helping to enhance our existing registered ap-

prenticeship program and, more importantly, structure a flexible, industry-recognized, nonregistered model that warrants the same level of recognition and respect that our current registered programs provide.

I would like to thank the subcommittee for holding today's hearing on this important subject.

Mr. Chairman, this concludes my formal remarks. I'm prepared to answer any questions that you or the other members of the committee may have.

[The statement of Mr. Bennett follows:]

Statement for the Record for Associated Builders and Contractors

Testimony of
Michael Bennett

Before the
House Committee on Education and the Workforce
Subcommittee on Higher Education and Workforce Development

On
"Expanding Options for Employers and Workers Through Earn-and-Learn Opportunities"

July 26, 2017

Good Morning Chairman Guthrie, Ranking Member Davis and members of the Subcommittee on Higher Education and Workforce Development. Let me begin by thanking each of you for the opportunity to testify before you today on how to expand opportunities for workers through workforce development and the earn-and-learn model.

My name is Michael Bennett. I am the vice president of the Cianbro Companies, based out of Pittsfield, Maine, and have been with the organization for 21 years. Today I am testifying on behalf of Associated Builders and Contractors. I serve on the board of directors of ABC's Maine Chapter; I chair the National ABC Workforce Development Committee; and I serve as a trustee of NCCER, created as the National Center of Construction Education and Research.

As an employee/owner, I am pleased to share with you that Cianbro is one of the United States' largest, most diverse, open shop, 100 percent employee-owned construction and construction services companies. Cianbro operates in 41 states and employs more than 4,000 team members, managing and self-performing heavy civil, structural, mechanical, electrical, steel fabrication and coating work. Ranked #103 on Engineering News-Record's 2017 Top 400 Contractors, Cianbro is best known for managing major construction projects along with self-perform capabilities and hands-on construction techniques.

Throughout its 68-year history, Cianbro has safely and efficiently planned, managed and constructed many technically complex, historic and environmentally sensitive projects for a wide variety of public and private clients. A total commitment to safety, combined with the enthusiasm of an innovative team of construction professionals, has enabled Cianbro to build a durable reputation for completing projects safely, on schedule and within budget.

Cianbro is a nationally recognized leader in pursuing health and safety in the workplace with such distinctions as the Healthiest and Safest Company in America, awarded by the American College of Occupational and Environmental Medicine. We are one of 11 contractors in the country to receive ABC's highest level of safety performance award. The International Risk Management Institute honored Cianbro with the distinguished Gary E. Bird Horizon Award for excellence in innovative risk management in the construction industry.

I do not share these accolades with you to seem arrogant or pompous. Cianbro is actually a very humble organization. I share these with you to demonstrate that we are simply hardworking Americans who believe in the spirit of teamwork. We have a placard in every Cianbro conference room and classroom that reads, "No One Is Smarter Than All of Us." I would like to think that applies here today with our discussion.

Our focus on safety innovation goes back many decades. We took these lessons learned and applied those to our company when we established and Employee Stock Ownership Plan, our wellness program, and today we apply these same leadership skills to our workforce development efforts. We do this because we must evolve and we believe it is our responsibility.

Again, I consider myself very fortunate to be here with you today to share our story. Our workforce development model is successful and can be replicated. For that reason, I would like to share a few details about what works, what does not work, and what the government and private sector can improve upon.

To set the stage for you, we believe we have a moral obligation to ensure the safety of our team members and business partners. Our philosophy is that everyone deserves to go home in better condition than when they arrived.

Cianbro has been committed to workforce development since its inception. Early in our history, on-the-job experience developed many of our skilled construction veterans. Over time, our workforce development has become more and more structured. Today, the company's commitment to developing a safe, highly skilled construction workforce is greater than ever, and as we proudly anticipate the grand opening of our new Cianbro Institute, a state-of-the-art workforce development facility that combines classroom, hands-on labs and simulated work environments as well as a wellness center. Our Cianbro Institute provides more than 75 different educational classes and professional programs that include skilled trades, safety, supervisor and leadership as well as annual compliance updating.

While I would love to talk about my company for the duration of my testimony that is not why I am before you today. I'm here to talk about a serious issue that I know everyone in this room is aware of: the skills gap and worker shortage. Or, on a more macro level, developing the next

generation of skilled crafts professionals in a way that promotes safety, continual learning and career development.

As our nation confronts the skills gap and workforce shortage, Cianbro has always looked at this issue as an opportunity rather than a problem. This attitude has served our company well over the years and created many great opportunities for our organization. We view the growing skills gap as an opportunity for our company, the industry and the country.

Great attention is being paid to the value of career and technical education and the need to evolve our educational system as new technologies, means and methods are being introduced. The recent re-authorization of the Perkins Act is a significant step in the right direction. Thank you to all of you who contributed to that success.

As we look at the holistic picture of workforce development, successful models combine technical knowledge with technical proficiency through hands-on application and on-the-job experience. When you employ the earn-while-you-learn model and support individuals with lifelong learning and mentoring, the opportunities are endless.

We just have to believe. If we believe in our youth, the underemployed and the unemployed and if we're willing to invest in their development, this country can outsmart this skills gap and workforce shortage.

To do this we must have flexibility. The construction industry is dynamic. Our clients are sophisticated. The rate of change in our society is greater than ever. Our workforce development models must evolve to meet these demands. As a self-performing contractor, we are builders who employee skilled craft professionals and this is vital to our future success. You may be surprised to hear that as an organization we provide both apprenticeship programs registered with the Department of Labor, which meet the needs of state licensing requirements, and non-registered, industry-recognized programs to best meet the needs of our clients.

Although Cianbro uses DOL registered apprenticeship programs, we do feel there are some impediments to using the system and we see room for improvements. For example:

- Current apprenticeship programs are state-licensing driven, not necessarily-business and industry-need driven. Sometimes we are teaching people skills that will not be valuable in the market.

- Time requirements are rigid and not always business-relevant. Nor do they allow for individuals to excel and progress if they are excellent students.

- Requirements for on-the-job hours and artificial ratios of journey level to apprentice do not always align with the scope of work on a project.

- Enrollment numbers are limited due to high costs and administrative burdens on employers.

- There is an inconsistency of programs. Multiple states have registered apprenticeships with the same title (carpenter, for example) that teach a variety of different tasks within each program. A contractor who sits on the State Apprenticeship Council told me his frustration was that hiring individuals with apprenticeship credentials did not necessarily mean that they possessed the same level of knowledge and/or competency that he needed them to know. He stated there is clearly no consistency among states. Compare that to an industry-recognized credential, such as the NCCER, in which a contractor knows exactly what skills a person possess.

- There is no consistent reciprocity among states. In today's mobile environment, it is very common for craft workers to work in multiple states in a single year. Their ability to do so is restricted by the lack of consistency.

- Program approval in some states has all but eliminated the possibility for merit shop contractors or associations to get approval for a registered apprenticeship. For example, a business associate recently shared with me some of their challenges attempting to register their carpentry apprentices with the state. The state approver demanded that they add residential and commercial tasks to their industrial carpentry apprenticeship program. These were skills they had no intention of utilizing. This one individual's opinion or subjectivity created an undue hardship on this particular contractor.

- Another business associate was attempting to register their pipefitters. A requirement demanded that the apprentices must also have steam fitting and copper pipe experience in the program. The contractor was working on heavy carbon pipe only for the duration of the job for this particular client. The skills of steam fitting and copper pipe added no value to the individual or business.

These unnecessary requirements are a burden to the government and taxpayers because they're being forced to regulate programs that provide little to no value in the marketplace.

Why do we value industry-recognized programs?

Because they work.

Industry-recognized programs come in all shapes and sizes, and that is the beauty of them: they provide for the highest level of flexibility that benefit the worker, their company and their client. Industry-recognized programs give students, veterans, second-chance seekers and the entire American public an opportunity to learn a skill, develop themselves and build their careers. I am not here to criticize registered apprenticeship programs; rather, I am here to demonstrate that industry recognized programs are the best tools available to the industry right now.

An important part of industry-recognized programs is that they allow for multi-skill learning. This means that a person can be a skilled carpenter and enter a program to become a competent instrumentation fitter. It also means that a carpenter who is in a program to be a fitter may also become skilled in equipment operation or rigging. This provides the flexibility to mix and match the necessary skills our organization requires to build each project. It is extremely valuable in today's marketplace for an individual to be proficient in multiple crafts; not only for the company but the worker themself.

Industry-recognized programs also allow for competency-based learning. This method of development is invaluable to contractors. A project can sometimes take years to develop. During this time a company's resources can be redeployed to meet the demands of other projects. Having the ability to deliver competency-based programs allows us to quickly develop and mobilize the talent necessary to meet the demands of the project. The team member also benefits as they develop new skills, diversify their abilities, enhance their earning potential, and create work opportunities for themselves.

For several years the industry and the country have discussed the impending skilled labor shortage. That shortage of skilled labor is now upon us; there are approximately 500,000 jobs in the construction industry ready to be filled today. That is half a million good-paying, stable jobs that could be filled if there were an adequate supply of skilled workers. Furthermore, according to market projections, if there is a large-scale infrastructure bill passed, the amount of jobs that need to be filled would balloon to one million by 2020.

That is why the construction industry is so excited about President Trump's executive order to expand apprenticeship opportunities for all Americans. By encouraging industry-recognized programs and embracing an "all-of-the-above" approach to workforce development, the President's executive order shows a commitment to innovation and embracing the methods that work.

There are ways that future programs can embrace the innovation of the private sector while keeping the focus on what is best for American students and workers.

- Align our apprenticeship programs to support both our educational system and business workforce development efforts.
- The programs must be industry/market-driven and flexible in structure, scheduling and duration to address the changes in industry means, methods and technology.
- Programs should be competency-based, allowing those who quickly master a skill set to progress quicker than those who may require more time.
- Allow the nationally recognized curricula and credentials already being utilized in the industry to provide the foundation for this new, flexible, third-party oversight.
- Any government-funded programs should establish a partnership between the educational entity and the employer to ensure job placement during or upon completion of the program.
- Allow for targeted programs to be developed. Competencies evolve quickly with changing business demands, and employers should be able to build those targeted competencies for those high-demand positions to meet the client's needs.

- As in education, creating multiple pathways for our students has proven successful. Creating multiple pathways for our apprentices will also be beneficial to our country. Some thoughts on how we could accomplish this:
    - Establish standardization of skill requirements across traditional crafts among federal and state apprenticeship councils.
    - Establish a non-registered, industry-recognized federal committee or task force consisting of educators, non-profits, industry members and union and merit shop representatives to develop a set of guidelines and metrics for an industry-driven peer auditing process to approve and monitor programs for rigor, relevance and integrity.
    - Allow for the utilization of nationally recognized, portable, industry-recognized credentialing programs.
    - Create reciprocity among all states that provides opportunities for craft professionals and reduces burdens on business and government.

As a contractor building projects of scale across the country, we have needs for skilled craft professionals who are proficient working alone and those who are proficient working with others. Our ability to leverage the flexibility of non-registered industry recognized programs provides us with the structure to develop skilled workers who must demonstrate their competency before putting work in place at a rate sometimes years ahead of a registered program.

For example, we recently completed the largest upgrade to an oil refinery of its kind in decades here in the United States. The project required us to staff 250 pipe welders. As we strategized with other professionals outside of our company, we were told it would be impossible to develop a pipe welder in 12 weeks. The traditional model for this skill was very lengthy, and in a registered apprenticeship program would require 144 hours of classroom time and a minimum of 2,000 work hours. Cianbro not only developed the 250 welders within a 12-week period, but many of those welders learned a new skill that doubled their earning potential. Skeptics of our process would claim that these new welders lacked adequate development, but please listen to

this: in construction, there are cycles within the project schedule when the demand for certain skilled labor has ebbs and flows. This is the nature of our industry. When the next downturn hit, one might have thought that Cianbro would sideline the newest hires first. However, based on our company's detailed metrics of performance, 14 out of the 15 top performing welders came from this new industry-recognized program, not our veterans. The model works.

In closing, I'd like to leave you with these sentiments: When I woke up this morning, I was comforted knowing I had a good night rest, thanks to the skilled carpenter who built my house, which keeps me warm and dry. I was thankful my alarm clock had power and went off and that the lights came on when I threw the switch, thanks to the skilled electrician who wired my house. I am grateful every morning I have a warm shower, thanks to the skilled boiler technician and plumber. I am thankful to my automotive technician, who keeps my vehicle in good working condition so that it starts every day. I appreciate the road and bridge builders, as does my family, knowing I can travel safely to and from work. I am also thankful for the dentists, doctors and other professionals who look after my health.

Regardless of the work that I need performed personally, I want to be confident that these professionals have the skills and competency necessary to perform the task. I am appreciative that their development contained rigor and relevance to their skill sets. Our society highly values our doctors, lawyers and dentists. We sometimes take for granted our other professionals. I think you would agree, our country requires and deserves to have the best of the best at all levels of these professions, and none should be taken for granted. So as we work together to enhance the quality and quantity of our skilled vocations in this country, I offer you the support of ABC and myself in helping to structure a flexible, industry-recognized, non-registered model that warrants the same level of recognition and respect that our current registered programs provide.

I'd like to thank the subcommittee for holding today's hearing on this important subject. Mr. Chairman, this concludes my formal remarks. I am prepared to answer any questions you and the other members of the subcommittee may have.

Chairman GUTHRIE. Thank you, Mr. Bennett, for your testimony.

Mr. Peglow, you're now recognized for 5 minutes for your statement.

STATEMENT OF ROBERT PEGLOW, STUDENT, KENTUCKY FEDERATION FOR ADVANCED MANUFACTURING EDUCATION (KYFAME), FRANKLIN, KENTUCKY

Mr. PEGLOW. Hi. My name is the Robert Peglow, and my personal safety commitment is to always wear my safety glasses when necessary. I am an apprentice sponsored by Kobe Aluminum in Bowling Green, Kentucky.

The KYFAME program was a once in a lifetime opportunity for me. It was also a second chance.

My story begins in 2014 when I graduated from high school. I didn't know what I wanted to do. The only thing I knew was that I was going to college. I didn't like school, and I never have. I believe it is necessary and a great tool to obtain any career you would like, but it wasn't really for me. I went to college for 1 year after high school and didn't do so well. I wasn't focused or dedicated as much as I should have been, and I basically failed out. I took a year off to rethink what I really want to do and get my head in the right place.

In the spring of 2016, I decided I was ready to go back to college. I still didn't know for what, but I knew I needed to. I also knew I was ready. I had grown up and matured. I now had a fiancee to think about, instead of just myself.

I discovered the KYFAME program through a friend of mine and decided I would explore the option. I talked with some of the people that are associated with the program and decided this is for me; this is the opportunity I have been searching for.

I started the program in the fall of 2016. I immediately discovered this wasn't an ordinary technical program. Most programs are 2-year programs where you earn a degree and then go to work in your field of study. In the KYFAME program, I was able to work 3 days a week as well as go to school the other 2 days. I have learned more than I could have possibly imagined both in work and school.

The reason why this program works so well is that everyone involved is fully dedicated, from the sponsoring companies to the professors and everyone in between. After being in the program for a year, I can see that their sole purpose is to make this program succeed.

The professors give out their personal emails and cell phone numbers at the beginning of class and tell us to call or email any time if we need anything, and they mean it. They are dedicated to our success, and it shows. I have stayed after hours on multiple occasions with professors to study or ask questions. I am greeted with a smile every time and never rushed in our conversations.

There are many reasons this program has been such a blessing to me. I have had the opportunity to go to surrounding high schools and speak to students interested in the program. I have been able to develop my skills in numerous ways beyond my belief. I attended the national AMT conference and presented there as well. Coming into the program, I would not have considered myself a very good

public speaker, nor did I like doing it. Now I am the first to volunteer for presentations and am happy to do them.

One of the biggest benefits I have discovered is the work aspect of the program. We get to work alongside experienced technicians every day at work. We also have an experienced maintenance adviser to help develop our skills and answer any questions we have. As students, we all go through the same curriculum together. There have been a few nights a group of us have met together and worked on projects or studied. This has been extremely helpful because we all have our own strengths and weaknesses.

At the beginning of my statement, I gave my personal safety commitment. The number one thing we have been taught is our safety. We are expected to share our safety commitment at the beginning of conversations or presentations. This shows how committed we are in everything that we do. It is also just one of the many things I have learned along this journey.

Without this KYFAME, I can say I would not be where I am today. I found this program at a low point in my life, and it has helped me change my -- turn my path around. I am now at a high point in my short life, and I can truly say it is because of KYFAME. Speaking as a student from a KYFAME chapter, I appreciate this committee's work on apprenticeship programs. I'm happy to answer any questions you may have. Thank you again for your time.

[The statement of Mr. Peglow follows:]

Robert Peglow

7/26/2017

Expanding Options for Employers and Workers through Earn and Learn Opportunities

Hi my name is Robert Peglow and my personal safety commitment is to always wear my safety glasses when necessary. The SKY Fame program was a once in a lifetime opportunity for me. It was also a second chance. My story begins in 2014 when I graduated from high school. I didn't know what I wanted to do. The only thing I knew was that I was going to college. I didn't like school and I never have. I believe it is necessary and a great tool to obtain any career you would like, but it wasn't really for me. I went to college for one year after high school and didn't do so well. I wasn't focused or dedicated as much as I should have been and I basically failed out. I took a year off to rethink what I really wanted to do and get my head in the right place. In the spring of 2016 I decided I was ready to go back to college. I still didn't know for what but I knew I needed to. I also knew I was ready. I had grown up and matured. I now had a fiancé to think about instead of just myself.

I discovered the KYFAME program through a friend of mine and decided I would explore this option. I talked with some of the people that are associated with the program and decided this is for me. This is the opportunity I have been searching for. I started the program in the fall of 2016. I immediately discovered this wasn't an ordinary technical program. Most programs are two year programs where you earn a degree then go work in your field of study. In the KYFAME program, I was able to work three days a week as well as go to school the other two days. I have learned more than I could have possibly imagined both in work and school.

The reason why this program works so well is that everyone involved is fully dedicated, from the sponsoring companies to the professors and everyone in between. After being in the program for a year I can see that their sole purpose is to make this program succeed. The professors give out their personal emails and cellphone numbers at the beginning of class and tell us to call or email anytime if we need anything and they mean it. They are dedicated to our success and it shows. I have stayed after hours on multiple occasions with professors to study or ask questions. I am greeted with a smile every time and never rushed in our conversations.

There are many reasons this program has been such a blessing to me. I have had the opportunity to go to surrounding high schools and speak to students interested in the program. I have been able to develop my skills in numerous ways beyond my belief. I attended the national AMT conference and presented there as well. Coming into the program I would not have considered myself a very good public speaker nor did I like doing it. Now I am the first to volunteer for presentations and am happy to do them.

Robert Peglow

7/26/2017

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At the beginning of my statement, I gave my personal safety commitment. The number one thing we have been taught is our safety. We are expected to share our safety commitment at the beginning of conversations or presentations. This shows how committed we are in everything that we do. It is also just one of the many things I have learned along this journey. Without this KYFAME, I can say I would not be where I am today. I found this program at a low point in my life and it has helped me turn my path around. I am now at a high point in my short life and I can truly say it is because of this KYFAME.

Speaking as student from a KY FAME chapter, I appreciate this committee's work on apprenticeship programs. I am happy to answer any questions you may have. Thank you again for your time.

Chairman GUTHRIE. Thank you for your testimony. Your story and stories like yours make us all excited on both sides, and you are a very good public speaker, so congratulations on that.

I now recognize Mr. Hogan for 5 minutes for his opening statement.

STATEMENT OF ROB HOGAN, VICE PRESIDENT OF MANUFACTURING AND MATERIAL DISTRIBUTION, NEWPORT NEWS SHIPBUILDING, NEWPORT NEWS, VIRGINIA

Mr. HOGAN. Good morning and thank you, Chairman Guthrie, Ranking Member Davis, and distinguished members on the Subcommittee of Higher Education and Workforce Development.

As kindly introduced by Mr. Scott, my name is Rob Hogan, and I'm the vice president of manufacturing and material logistics at Newport News Shipbuilding, which is a division of Huntington Ingalls Industries, based in Newport News, Virginia. And I'm honored to represent Newport News Shipbuilding in today's discussion and want to thank the subcommittee for this invitation.

Huntington Ingalls Industries is an American Fortune 500 company with $7 billion in annual revenues and work backlog of approximately $20 billion. With facilities located in Virginia, Mississippi, California, Florida, Texas, and Colorado, we employ approximately 37,000 workers. Among them are more than 15,000 craftsmen and -women, 5,000 engineers, 1,600 of whom have advanced degrees, and we employ approximately 5,000 veterans.

At Newport News Shipbuilding, we have been in business for 131 years, and many of our employers are third-, fourth-, and even fifth-generation shipbuilders. Nearly 1,000 of our employers are what's called master shipbuilders. These are employees with 40 or more years of continuous service and a group of which I'm proud to be included. Our shipbuilders build the most advanced ships in the world for the United States Navy using our expertise in nuclear propulsion, naval design, and manufacturing. We are the sole designer and builder and refueler of nuclear-powered aircraft carriers and one of two providers of nuclear-powered submarines.

In my role, I'm responsible for all shipyard manufactured material, material warehousing, and material distribution for all of our Navy and commercial programs, and while our facilities and manufacturing processes are critical, I will tell you it is our shipbuilders who really make us successful.

We employ 20,000 skilled craftsmen and -women and support personnel who are building our Nation's nuclear Navy. It is our responsibility and our top priority to train our shipbuilders and continuously develop their skills. We invest heavily in workforce development, spending over $80 million annually in various types of training. And I'll talk more in detail about our premier training program, The Apprentice School, in just a moment, but I would like to first talk about what we're doing to attract and hire our Nation's next generation of shipbuilders.

Since we began building ships more than a century ago, two-dimensional paper drawings have been the primary method for conveying design data to our shipbuilders. Today, we are migrating to an integrated digital enterprise to do away with the need for traditional drawings, and we're leveraging technology to transform how

we build ships. Recognizing that this digital transformation will touch all areas of our business, we are coordinating with community colleges and university partners to incorporate digital shipbuilding techniques into many fields of study, including engineering, design, IT, and trades training.

We are also actively involved with workforce investment boards, school districts, and local community colleges in several other ways. We support a Career Pathways program in concert with public schools throughout Hampton Roads where employees mentor students and provide opportunities to experience future careers.

Another program we lead is called Girls with Engineering Minds in Shipbuilding, or GEMS, where our female engineers serve as mentors to middle school girls, encouraging them to pursue engineering studies in high school and beyond. We also offer local public school STEM educators and professional counselors the opportunity to take part in a 2-week paid internship to learn about shipbuilding and how the STEM concepts they teach are used in real workplace applications.

We participate in industry events and nationwide diversity conferences. We recruit onsite during the conferences, and doing this has helped us diversify our workforce. But another way we recruit and attract and train our future shipbuilders and future leaders is through our world-class apprentice school. For 98 years, the school has been a great example of an alternative choice to traditional college experience and has provided tremendous results for both students and our company.

Our apprentices are paid a salary and receive full benefits on day one, all while earning college credits and learning a trade in 19 shipbuilding disciplines and 8 advanced programs. Our graduates represent about 13 percent of our current workforce and more than 50 percent of our production management team. And although not obligated to stay with our company, more than 70 percent of our graduates are still with us after 15 years of graduation.

Apprentice graduates are found at all levels of the organization and all levels of management. Currently, I am one of three senior leaders in the company who are graduates of The Apprentice School. The school has grown in popularity and become extremely competitive. On average, we receive more than 2,800 applications a year for 240 openings. We currently have 750 students enrolled, and we believe these are our future leaders.

In closing, these are just a few examples of how we are recruiting and retaining a skilled workforce capable of operating and keeping pace with today's rapidly evolving technologies. Training and professional development are not only vital for our success but are essential tactics in attracting and retaining millennial workers who demand ongoing learning and new opportunities.

Thank you for the opportunity today, and I look forward to any questions you may have.

[The statement of Mr. Hogan follows:]

House Subcommittee on Higher Education and Workforce Development

Rayburn House Office Building

Washington D.C.

July 26, 2017

H.R. Hogan

Testimony, HEWC Subcommittee on Higher Education and Workforce Development - Hearing July 26, 2017

Introduction

Good morning and thank you. Chairman Guthrie, Ranking Member Davis, and distinguished members of the subcommittee on Higher Education and Workforce Development, I am honored to represent Huntington Ingalls Industries in today's discussion. I want to thank the subcommittee for the invitation to share my thoughts with you today about this very important topic.
My name is Rob Hogan. I am the Vice President of Manufacturing and Material Distribution at Newport News Shipbuilding, a division of Huntington Ingalls Industries based in Newport News, Virginia. I am responsible for all shipyard manufactured material and material logistics for all Navy and commercial programs, this includes over:

- 2,800 skilled craftsmen and support personnel
- 2.3 million square feet of manufacturing footprint
- 2.4 million square feet of warehouse space
- 500,000 products and assemblies delivered each year; from washers to 550+ ton modular units

I am proud to say that I am an Apprentice School graduate, a member of The Apprentice School Alumni Association and Master Shipbuilder. The Apprentice School provided me with an education and experience that was unparalleled. It opened doors to a lifetime of experiences, opportunities and advancement that would not have been possible without its very foundation. Currently, I serve on the board of directors for the Commonwealth Center for Advanced Manufacturing and the Virginia Manufacturing Association, where I recently served as Chairman. I am also a recent appointee to the Board of Directors for FIRST Robotics' Chesapeake division. In addition, I am active in the American Welding Society, Society of Manufacturing Engineers, and the Association for Manufacturing Excellence.

Huntington Ingalls Industries

Huntington Ingalls Industries is an American Fortune 500 company with $7.1 billion in annual revenues and a work backlog of more than $20 billion. We employ approximately 37,000 workers at our facilities in Virginia (largest industrial employer), Mississippi (largest private employer), California, Florida, Texas, and Colorado. Among these workers are more than 15,000 craftsmen, 5,000 engineers, 1,600 with advanced degrees and more than 5,000 veterans. Many of our employees are third, fourth, and fifth-generation shipbuilders, and more than 1,000 are "Master Shipbuilders"- employees with 40 or more years of continuous service to the company.
We also provide a wide variety of products and services to the commercial energy industry and other government customers, including the Department of Energy. And, we continuously grow our business in similar marketplaces.

Newport News Shipbuilding

Today, Newport News Shipbuilding (NNS) in Virginia is the sole designer, builder and refueler of U.S. Navy aircraft carriers and one of two providers of U.S. Navy nuclear powered submarines. We build the most advanced ships in the world using our expertise in nuclear propulsion, naval design and manufacturing. We are currently building the new *Gerald R. Ford*-class aircraft carriers and *Virginia*-class submarines, and performing Refueling and Complex Overhaul (RCOH) on *Nimitz*-class aircraft carriers. We provide fleet services for our ships worldwide, and using our nuclear and manufacturing expertise, are expanding into Department of Energy and alternative energy ventures. The ships we build perform some of our country's most important work. Simply put, there is no other place in the world capable of doing the work we do.

It is my privilege and honor to call myself a Newport News Shipbuilder and alumnus of the Apprentice School. NNS is an exciting place to work and every day provides a unique opportunity to learn and grow. It is a place I call home and where I work alongside the finest group of shipbuilders in the world.

Workforce Development

We invest heavily in workforce development, investing over $80 million annually in various types of training. This includes The Apprentice School, Night School, and tuition reimbursement programs that prepare our workforce to be effective in the important job of building, repairing and overhauling our country's Navy ships. We continue to invest precious capital funds to modernize our training facilities with state-of-the-art technology, and with real world, production mock-ups that allow our workers to learn production crafts in a safe, controlled environment.

Through The Apprentice School, we partner with State and local officials and education providers to jointly build a workforce and a community. We are actively involved with workforce investment boards, school districts and community colleges in our area of Virginia. We are focused on bringing world-class Career and Technical Education High Schools to the region.

We annually perform 75,000 training events on the waterfront, excluding The Apprentice School. As shipbuilding technologies advanced, as with the design and construction of the *Ford*-class aircraft carriers, so have our internal training programs. For the USS *Gerald R. Ford* (Commissioned by the U.S. Navy on 7/22/2017), more than 50 new production training courses were developed to provide the needed skills and knowledge to our workforce.

All training at NNS is done with safety in mind. We value our employees above all else and will not compromise on their safety. Maintaining a safe and healthy work environment is our number one priority. It is a significant part of who we are and is

engrained in our culture and core values.

History of The Apprentice School

Apprenticeship is far older than the idea of public education which is a fairly modern notion. From the earliest times, craftsmen in every trade have traditionally taught young apprentices the skills that they had to learn to become master craftsmen themselves, and by the Middle Ages the apprenticeship system was highly organized into craft guilds (just think, where would the world be without the genius of Leonardo da Vinci or Michelangelo, both apprentices to the early masters).

It followed naturally that there would be an apprentice program at Newport News Shipbuilding. In the beginning, it was an informal system of 'over-the shoulder' training in keeping with the prevalent standards of the time. Eight years after the company was organized, and four years after the first ship was launched, the first apprentice was certified in 1894.

In 1911, the company initiated a system whereby apprentices, and other company employees, might attend classes at night in the Newport News public schools. This was a step toward the establishment of education programs on company time and within the premises of the yard. An opportunity for workers to '*learn and earn*.'

More than 400 apprentices had completed their training and been certified by 1919, when the program was formalized and a school started within the yard. By Executive Order Number 24, dated July 1, 1919, the Rules for Apprentices were published. Apprenticeship was offered in more than a score of trades, with applicants from employees' families enjoying a preferred entry status. Minimum age for admission to the program was 16 and all applicants had to pass a physical exam and submit two references, 'certifying to the good moral of character and habits of the candidate.' All apprentices were required to attend class two half-days each week. Students were paid an hourly wage according to a set schedule and received a bonus of $100 at the completion of the program.

Classes started with three instructors and 126 apprentices. Classroom instruction was intended to complement vocational training. "All lessons are designed to eliminate much that is uselessly theoretical, and to present those things which are part and parcel of the boys' trades," according to the company's newsletter. "Thus, the apprentice must not only work every problem offered, but work them correctly before proceeding to the next lesson."

Enrollment in the school was never less than 120 even in the hardest times, and rose to 450 by the late 1930's. The school won recognition as a model of its kind. 'Training by Intention' replaced the former hit-or-miss 'absorption' method of training in 1928, and fulltime instructors were hired as classroom teachers. According to a U.S. Department of

Labor report in 1940, almost all of the instructors had passed through the apprenticeship program themselves; at that time there were approximately 10 apprentices under the supervision of each of the 40 instructors.

In addition to academic classes, there was an athletic program that was extremely popular with the apprentices and the workers in the yard. (The Apprentice football team went undefeated in its 6-game season in 1919.) An athletic building and modern stadium were opened in the 1930's, and a cafeteria, dormitory, and new education building followed. The Apprentice School had more than 1,000 students by World War II, with their own entertainment programs and publications. It was the only institution of its kind with a junior college ranking.

The Apprentice School Today

For 98 years, The Apprentice School has been guided by its mission to recruit and develop men and women for highly technically skilled careers in shipbuilding, and alumni who possess the knowledge, skills, work ethic, and pride of workmanship to fully anticipate and meet current and future needs of the U.S. Navy and shipbuilding industry.

Throughout the school's history, program offerings have continued to evolve to meet customer demands for a highly skilled and innovative workforce. The constant in the evolutionary process is our cohort model, similar to that of the U.S. Naval Academy, used to deliver academic instruction that complements job experiences strategically timed to meet production and innovation demands. The shipbuilding and defense industries have benefited from this comprehensive approach to training and education and the work of alumni who possess extensive knowledge of all aspects of shipbuilding necessary to innovate through the 21st century.

Since 1982, The Apprentice School has been accredited through the Commission of the Council on Occupational Education. Additionally, the school's 19 traditional shipbuilding apprenticeships and eight advanced apprenticeships are registered through the Virginia Department of Labor and Industry (DOLI). Our long-standing accreditation, and the fact that all our programs are registered with DOLI, demonstrates our commitment to offering high quality apprenticeships through an integrated approach that combines on-the-job training, related academic instruction, and leadership development opportunities.

The Apprentice School prides itself on being operationally relevant to NNS. Its programs, enrollment levels, courses, and curricula respond to the current and future needs of the shipbuilding industry and U.S. Navy. The return on investment is evident in the results the more than 10,000 graduates have had on the company and the shipbuilding industry.

Representing 13 percent of NNS's total current workforce, Apprentice School graduates comprise 60 percent of today's general foremen and 45 percent of the production management team. Company loyalty is strong among graduates as evidenced by the

extremely high retention rates. More than 70 percent of graduates are still with the company 15 years after graduation. Apprentice graduates are found at all levels of the organization, and all levels of management. Currently, there are three vice presidents that are members of NNS's senior staff. The more than 3,000 graduates currently employed at the company can be found in more than 230 different occupations.

In addition to the contributions apprentices make to the company, opportunities also exist for apprentices to grow and polish their leadership skills outside of the shipbuilding environment. In an effort to grow personally, and give back to the community, opportunities exist to participate in student government and professional organizations, including Student Chapters of the Society of Naval Architects and Marine Engineers, Society of Manufacturing Engineers, and Jaycees. Apprentices provide ongoing support for many community outreach activities such as Habitat for Humanity, Relay for Life, to name a few.

Current and Future Programs

While traditional shipbuilding trades such as shipfitter, electrician and welder continue to be the foundation for existing programs, The Apprentice School has recognized the impact of advanced technologies on the industry. As a result, the school has added highly-skilled programs such as marine designer, modeling and simulation analyst, and nuclear test technician. The Apprentice School partners with local community colleges and universities to deliver the related academic component of these apprenticeships, which culminates in associate and bachelor degrees. In addition, the school has established articulation agreements with 10 colleges and universities, providing a seamless transfer of credits and continuing education opportunities for graduates.

Key Facts

Admissions:

- Applications received (last 4 year average) 2,800
- Average annual hiring: 230-240
- Selection ratio - 12:1
- 60 percent of those hired have some education beyond high school

Current Enrollment - 750 (as of 7-24-17)

Projected End of Year Enrollment - 825

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Current Demographics:

- 33 percent minority
- 16 percent female
- 9 percent veterans
- 28 percent apprentices worked in the company before entering an apprenticeship (i.e. "transfers")

Provided below is a comparison of apprentice graduates to college graduates:

Apprentice School Graduate	College Graduate
$273,000 Scholarship (includes benefits, earnings while in school, tuition, books and fees)	$33,000 average student loan debt
Earnings of ~ $187,000 for a four-year apprenticeship (includes earnings while in school)	Incidental / Part-time income during college
4-8 years of work experience leading to Associates & Bachelor degrees	Bachelor degrees with little to no work experience

Attracting the Next Generation of Shipbuilders

Integrated Digital Shipbuilding (IDS)

Since we began building ships over 130 years ago, 2-dimensional paper drawings have been the primary method for conveying design data to our shipbuilders. For most of that time span, the same could be said for any manufacturing or construction company across the world.

Today, the use of such drawings is in decline across the industrial landscape. Many companies, including peers in aerospace and defense have done away with the traditional drawings entirely and rely solely on digital work instructions – and have demonstrated large productivity and quality gains by doing so.

Technology has now caught up allowing the potential to make drawings obsolete in shipbuilding over the coming years. Migrating to an integrated digital enterprise, without the need for traditional drawings, will transform the way we build ships and provide NNS the competitive edge necessary to maintain and grow our business over the coming decades. Technology advancements such as this will also aid with NNS' ability to retract and retain the next generation of shipbuilders.

In 2016, NNS partnered with Old Dominion University (ODU) to offer an elective course in digital shipbuilding including model based definition, model based enterprise, digital

work instructions, laser scanning, PLM/CAD environments, and lifecycle maintenance and modernization.

The success of that pilot course has led us to collaborate with ODU to seek funding to stand up a certificate program in digital shipbuilding. Recognizing that the digital transformation will touch all areas of our business, we are coordinating with community college and university partners to incorporate digital shipbuilding techniques into many fields of study including engineering, design, IT, and trades training. The programs are also being incorporated into classes at the Apprentice School. The same skill sets and competencies that are being developed through the course and certificate programs are also being incorporated into classes at The Apprentice School.

In addition, we are building IDS features including Augmented Reality, additive manufacturing, and other components into our K-12 public school outreach through Career Pathways as we continue to work to counteract outdated stereotypes of manufacturing careers.

Career Pathways
In concert with public schools throughout Hampton Roads, NNS employees mentor students and provide opportunities to experience future careers. This partnership provides a unique opportunity for the business to contribute directly to the school experience of the youth who are just beginning to formulate dreams for the future. A partnership can take many forms and is flexible to accommodate a wide range needs of both the business and the schools.

Teacher / Counselor Internship
NNS offers local Science, Technology, Engineering and Mathematics (STEM) educators and professional counselors the opportunity to take part in a two-week long paid internship during the summer. Designed specifically for educators, participants are exposed to all facets of shipbuilding to include engineering, modeling and simulation, augmented reality and hands-on experience with trades. It provides an opportunity for teachers to witness how the STEM concepts they teach in the classroom are used in real work place applications. Teachers and counselors are also exposed to the vast career options available at NNS and through The Apprentice School.

Job Shadowing
Job shadowing program affords students the opportunity to learn about careers at NNS and more. Paired with mentors from our engineering and information technology divisions, students tour different areas of NNS to learn about ship design/engineering, and ship construction. Job shadowing takes place twice a year and allows students to meet required job shadowing or intern hours.

eSHIP/iSHIP
eSHIP and iSHIP Programs are geared towards high school seniors planning to attend a 2-year or 4-year higher learning institution to major in an ABET accredited engineering program or an IT program. These students learn about engineering through a trades immersion experience as high school seniors and begin a paid internship before they start college. Provided all requirements are met, students will continue to intern every summer, and upon graduation be eligible for full time employment as engineers or engineering technicians.

Girls with Engineering Minds in Shipbuilding (GEMS)
The GEMS program seeks to diversify the talent pipeline in engineering by targeting middle school girls in two middle schools with high at risk populations. Female NNS engineers serve as mentors to the girls at after-school meetings throughout the year. The girls engage in hands-on STEM and engineering activities to expand their horizons and encourage them to pursue careers in these areas. GEMS participants are encouraged to pursue engineering study in high school and beyond.

Engineering Career Day
Career Pathways partners with the Peninsula Engineers Council, Jefferson Lab and NASA to host the annual Engineering Career Day. During this event, students are able to visit engineers and other STEM professionals from NNS, NASA and Jefferson Lab. This event helps provide students with an understanding of the many different STEM careers from local businesses.

Manufacturing Day
National Manufacturing Day (MFG Day) brings manufacturers, educators and community leaders together to address challenges in order to help their communities and future generations thrive. It is a day to address common misperceptions about manufacturing by giving manufacturers an opportunity to open doors and show, in a coordinated effort, what manufacturing is – and what it is not. By working together during and after MFG Day, manufacturers begin to address the skilled labor shortage they face, connect with future generations, take charge of the public image of manufacturing, and ensure the ongoing prosperity of the whole industry.

Youth Career Expo
NNS is the premier sponsor for the Youth Career Expo that is held at the Hampton Roads Convention Center. The Youth Career Expo aims to educate students about local careers and businesses. During this event, students are able to walk around, obtain information from local businesses, participate in human resources related panel discussions and receive feedback on their interviews through the mock interview sessions.

FIRST Robotics
NNS has formed a unique partnership with our regional FIRST Robotics affiliate, FIRST Chesapeake. In addition to providing monetary support to the program, we have worked to place NNS mentors or coaches with each FIRST team in the region to help the students achieve their goals and in so doing to let them know about career paths that are directly applicable to the skills they are developing through FIRST. We also put out displays at many of the competitions in the region so that students, families, and educators can see the innovative work being done at NNS and learn about career options. FIRST Robotics instills in students the type of technical, analytical, and problem-solving skills we want to see in our future employees and apprentices and our involvement reflects the value we place in the program.

National Diversity Conferences
We also participate in several nation-wide diversity conferences to include:

- Society of Women Engineers (SWE) Conference
- Black Engineer of the Year Awards (BEYA) and STEM Conference
- Women of Color STEM Conference
- Society of Hispanic Engineers STEM Conference
- Society of Asian Scientist and Engineers STEM Conference

We recruit onsite during the conferences, and doing this has helped us diversify our workforce.

Summary
These are examples of how we are recruiting and retaining a skilled workforce capable of operating and keeping pace with today's rapidly evolving technology is our top priority. NNS continues to establish robust training and development programs intended to develop and leverage the full potential of the workforce, increase employee engagement and efficiency, drive innovation, quality, productivity and growth. Training and professional development are not only vital for our success but are essential tactics in attracting and retaining millennial workers who demand ongoing learning and new opportunities.

NNS is in the midst of an exciting revolution in new technologies, ideas and opportunities. A bright new future exists in this industry and by investing in our most valuable asset – our employees – we can improve worker retention, boost productivity, strengthen product quality and ensure their global competitiveness.

Thank you for the opportunity to address you here today and I look forward to any questions you may have.

Chairman GUTHRIE. Thank you for your testimony, as well.

Ms. Hughes, you're now recognized for 5 minutes for your opening statement.

STATEMENT OF STACEY JOHNSON HUGHES, STATE CHAIR, KENTUCKY FEDERATION FOR ADVANCED MANUFACTURING EDUCATION (KYFAME), RUSSELLVILLE, KENTUCKY

Ms. HUGHES. Thank you, Chairman Guthrie, Ranking Member Davis, and all the members of the House Education and Workforce Subcommittee on Higher Education and Workforce Development. I am honored to have the opportunity to be here. My name is Stacey Hughes, and I currently serve as the State chairperson for Kentucky FAME, the Kentucky Federation for Advanced Manufacturing Education.

In addition to Kentucky FAME, since 2008, I have had the honor of leading a team of HR professionals in the areas of employee relations, legal, benefits, medical wellness, and education and development as Logan Aluminum's HR manager. Logan Aluminum, located in Russellville, Kentucky, is one of the largest aluminum rolling mills in North America, if not the largest. It has grown to more than to four times its initial capacity and provides over 40 percent of North America's beverage can sheet production.

Today, Logan Aluminum employs over 1,200 team members, produces 2 billion pounds per year, and is in the middle of a half a billion dollar expansion, which will add automotive capacity. Over the last 30 years, Logan Aluminum's education department has managed a successful maintenance apprentice program. This apprentice program has over 175 graduates, and 58 percent of our current engineering and maintenance leadership are graduates of this program.

In 2014, Logan Aluminum became a member of Kentucky FAME and soon transitioned our thriving program to FAME's advanced manufacturing technician earn-and-learn apprenticeship program. Logan Aluminum entrusted our existing program due to our belief in Kentucky FAME's vision and mission. So what is Kentucky FAME, and why would Logan Aluminum and over 200 Kentucky manufacturers join this effort? Kentucky FAME is an industry-led public and private partnership dedicated to implementing world-class models for developing manufacturing talent. FAME's vision is to transform Kentucky's manufacturing workforce to ensure the economic success of our companies and our Commonwealth.

Kentucky FAME is an active employer-led partnership that achieves its mission and vision through a variety of core functions. In 10 regional chapters, along with the education and economic development partners, FAME identifies critical needs skills in manufacturing, creates market-driven career paths, standardizes technical education curriculum and program delivery, provides meaningful work experience concurrent to a student's educational experience, markets and promotes manufacturing careers, and recruits manufacturing's next generation of employees through student sponsorship.

Kentucky FAME is not a new organization. With the leadership of our founding member, Toyota Manufacturing, Kentucky FAME launched in 2009 with nine manufacturers in central Kentucky.

This initial group collaborated with their local technical college to develop a new program to meet the growing need for multiskilled maintenance technicians. The Advanced Manufacturing Technician Program, known as AMT, is a 2-year associate's degree that incorporates technical skills, personal behavior, soft skills, manufacturing core exercises, and work experience. Each AMT student attends class 2 days a week and then works in their sponsoring company for 3 days a week.

Since 2009, FAME has grown exponentially. Today, over 225 students have graduated from AMT and over 95 percent currently work full time with the employers that sponsor them. Most AMT graduates earn an average of $45,000 per year when they enter full time, and they have little to no student debt. AMT graduation rates exceed current trends with a graduation rate of 89 percent. This compares to 12.8 or 49.4 percent with other associate's and bachelor's degree programs respectively.

In the fall semester of this year, 650 first- and second-year students will be enrolled in Kentucky FAME-endorsed programs. As previously mentioned, employers' numbers have increased as well. We have 10 regional chapters. In addition to the AMT program, we endorse and sponsor students enrolled in other manufacturing career pathways, such as entry-level production, tool and die, as well as manufacturing-focused engineering and business bachelor's degree programs.

Kentucky employers also invited almost 100 high school teachers into their facilities this summer for paid externships. Furthermore, other business sectors, such as healthcare, finance, and IT, have expressed interest in duplicating the FAME model to build apprenticeships in their trade. The success of Kentucky FAME has caused it to spread to other States, such as Texas, Missouri, Tennessee, Mississippi, and Alabama.

FAME has received numerous awards and recognition from entities such as the National Career Pathways Network, the German American Chamber of Commerce, and the National Association of Manufacturing.

In closing, the benefits of KYFAME to employers and educators and students are numerous. FAME helps companies develop curriculum programs to grow their current and future talent base. The partnership between employers and educators ensures a high standard of industry quality. Because of company collaboration, companies both large and small can participate. FAME's largest employer has over 9,000 employees, and its smallest has 25.

Students earn technical, practical, and high-demand education that leads to a promising career with little to no student debt. Speaking on behalf of Kentucky FAME, I appreciate your committee's work on this important issue. A skilled and ready workforce is critical to the growth of my company, my State, and our Nation. Kentucky FAME believes we have created a proven apprenticeship model to increase the quality of our workforce, and I'm proud to share it with you today.

Kentucky FAME supports the spirit of the Presidential executive order expanding apprenticeships in America and respectfully requests this subcommittee to introduce legislation to promote em-

ployer-led programs such as Kentucky FAME. I'm happy to answer any questions you may have. Thank you.

[The statement of Ms. Hughes follows:]

Congressional Testimony
House Education and Workforce
Subcommittee on Higher Education and Workforce Development
Stacey Hughes
KY FAME State Chairperson
HR Manager, Logan Aluminum

Chairman Guthrie, Ranking Member Davis, and all the members of the House Education and Workforce Subcommittee on Higher Education and Workforce Development, I want to thank you for the opportunity to be here. It is my pleasure. I am honored to testify this morning. My name is Stacey Hughes and I currently serve as the State Chairperson for KY FAME, the Kentucky Federation of Advanced Manufacturing Education.

In addition to KY FAME, since 2008, I had the honor of leading a team of HR professionals in the areas of employee relations, legal, benefits, medical, wellness, and education and development as Logan Aluminum's Human Resources Manager. Logan Aluminum located in Russellville, KY is one of the largest aluminum rolling mills in North America, if not the largest. It has grown to more than four times its initial capacity and provides over 40% of North America's beverage can sheet production. Today, Logan Aluminum employs over 1200 team members, produces 2 billion pounds per year and is in the middle of a nearly $500 million expansion which will add automotive sheet capability.

Logan Aluminum's education and development department manages a successful maintenance apprenticeship program. This apprenticeship has produced over 175 graduates over the last 30 years and 58% of our current engineering and maintenance leadership are graduates of this program. Furthermore, our historic plant turnover from this apprenticeship program has been less than 6%. In 2014, Logan Aluminum became a member of KY FAME, and soon transitioned our thriving program to FAME's Advanced Manufacturing Technician (AMT) earn and learn apprenticeship program. Logan Aluminum entrusted our existing program due to its belief in KY FAME's vision and mission.

So what is KY FAME and why would Logan Aluminum and now over 200 Kentucky manufacturers join this effort? KY FAME is an **industry-led** public private partnership dedicated to implementing world-class models for developing manufacturing talent. FAME's vision is to transform Kentucky's manufacturing workforce to ensure the economic success of its member companies and our Commonwealth.

KY FAME is an active **employer-led** partnership that achieves its mission and vision through a variety of core functions. Comprised of over 200 employer members in 10 regional chapters, along with education and economic development partners, FAME identifies critical skill needs in manufacturing; creates market driven career paths for manufacturing, standardizes technical education curriculum and program delivery; provides meaningful work experience concurrent

to a student's educational experience; markets and promotes manufacturing careers; and recruits manufacturing's next generation of employees through student sponsorship.

FAME is not a new organization. With the leadership of our founding member, Toyota Motor Manufacturing Kentucky, FAME launched in 2009 with nine manufacturers in central Kentucky. This initial group collaborated with their local technical college to develop a new program to meet the growing need for multi-skilled maintenance technicians. The Advanced Manufacturing Technician program, known as AMT, is a two-year associate's degree that incorporates technical skills, personal behaviors (soft skills), manufacturing core exercises, and work experience. Each AMT attends class two days a week for eight hours a day. The other three days a week, AMT students work for a sponsoring employer who matches their work experience with the AMT curriculum.

Since 2009, FAME has grown exponentially. To date, over 225 students have graduated from AMT and over 95% of them currently work full-time for the employers who sponsored them. Most AMT graduates earn an average $45,000 per year when they enter full-time employment they have little to no student debt. AMT graduation rates also exceed current trends. AMT students maintain an on-time graduation rate of 89%. This compares to 12.8% and 49.4% for other associate's and bachelor's degree programs respectively. In the Fall semester of 2017 over 650 first and second year students will be enrolled in FAME endorsed programs.

As previously mentioned, employer numbers have increased as well. What started with nine companies now consists of a statewide organization, with 10 regional chapters and over 200 manufacturing members. In addition to the AMT program, FAME also endorses and sponsors students enrolled in other manufacturing career pathways such as entry-level production operation, computerized machining and manufacturing, tool and die as well as manufacturing focused engineering and business bachelor's degree programs. KY FAME employers also invited almost 100 high school teachers into their facilities this summer for paid one-week externships to learn about manufacturing. Furthermore, other business sectors such as healthcare, finance and IT have expressed interest in duplicating the FAME model to build apprenticeships in their trades. The success of KY FAME has caused it to spread to other states including Indiana, Texas, West Virginia, Missouri, Tennessee, Alabama, Mississippi and Louisiana.

FAME has received numerous awards and recognition from entities such as National Network of Business and Industry Associations, the American Lightweight Materials Manufacturing Innovation Institute, the National Career Pathways Network, the German-American Chamber of Commerce, the National Academies of Science and Engineering, and the National Association of Manufacturing. Each of these organizations recognize KY FAME as a model for technical and apprenticeship- style education.

In closing, the benefits of KY FAME to employers, educators, and students are numerous. FAME helps companies develop curriculum and programs to grow their current and future talent base. The partnership between employers and educators ensures a high standard of industry

quality in program delivery. Because of company collaboration, companies both large and small can participate. FAME's largest employer has over 9,000 employees and its smallest member employees 25. Students earn a technical, practical and high-demand education that leads to a promising career with little to no student debt.

Speaking on behalf of KY FAME as its State Chairperson, I appreciate this committee's work on this important issue. A skilled and ready workforce is critical for the growth of my company, my state and our nation. KY FAME believes we have created a proven apprenticeship model to increase the quality of our workforce and I am proud to share it with you today. KY FAME supports the spirit of the Presidential Executive Order Expanding Apprenticeships in America and respectfully requests this Subcommittee to introduce legislation to promote **employer-led** programs such as KY FAME. I am happy to answer any questions you may have. Thank you again for your time.

Chairman GUTHRIE. Thank you for your testimony.

We'll now move into a round of questions, and I will recognize Chairwoman Foxx for 5 minutes for the purpose of asking questions.

Ms. FOXX. Thank you very much, Mr. Chairman.

And I want to thank our witnesses for being here. This is a very hot topic all over the country these days, and I'm very pleased that we have invited you all to come in and speak.

Mr. Bennett, I agree with your testimony that President Trump's executive order is an important first step toward increasing apprenticeship opportunities. Our workforce development programs are successful only if they can work at the speed of business, not the speed of government. Given the construction industry makes up the majority of registered apprenticeships, you're uniquely qualified to speak to the strengths and limitations of the current registration process, and you have done a pretty good job of explaining some of that. What changes should we consider if we want to increase business participation in the program?

Mr. BENNETT. Thank you. That's a great question. I think, to begin with, what you can do is make sure that business and industry is heard and represented on a regular basis. The industry, like you've heard here from the rest of the panel, is so dynamic and changing so quickly -- our society is changing so quickly with technologies and just the means and the method, so our ability to stay not only on top of but try to anticipate where it is going is very important. So keeping those open lines of communication are very important to how we progress forward.

Ms. FOXX. Great. Because we have such a limited time, I'm going to ask you later if you would give us some other specific recommendations on the industry-recognized process, but I want to make sure I have a little time to ask some other questions, but we'll come back to that.

Mr. Peglow, family is incredibly important, and I don't think we here in Washington talk enough about how important families are in inspiring people to improve themselves. In your testimony, you mentioned how getting engaged to your fiancee changed how you think about things. Why was getting engaged important to your decision to go back to school?

Mr. PEGLOW. That's a great question. Thank you. When I graduated high school, I was by myself, and that's all I had to think about was myself, so I really didn't think about family out of college or what kind of career I needed to support myself in the future. And when I met my now wife, I had to think about things in a different aspect. It wasn't just myself; it was going to be me and her. Eventually, we're going to want to buy a house, start a family, so I had to think on a larger scale instead of just myself.

Ms. FOXX. Thank you very much.

Ms. Hughes, I have heard from a number of employers that they cannot rely on the certificate of completion from a registered apprenticeship program as a guarantee of program quality. Given Logan Aluminum's long success with its own apprenticeship program, what guarantee did you have that Kentucky FAME's program quality would meet Logan Aluminum's standards?

Ms. HUGHES. Well, first, because we had a very wonderful partnership with our local technical college and with Kentucky FAME chapters and Kentucky FAME itself, we actually sit down and go over the curriculum together to make sure that it fits our needs. So we were very pleased with that. It actually mirrored the program that we already had, except it was actually a better program because it was the cohort program where our students didn't have to go to several schools in Bowling Green. They are actually located at a campus in Franklin, Kentucky, and they are together. Just like Robbie said, they work together, and we found that to be very helpful to the program. So we were very pleased with the classes. We know they're taught by the same professors that we had used in our other program previously, and the classes fit our needs.

And that's the great flexibility about Kentucky FAME, is that we do have that relationship and can sit down with the school and make changes if our technology changes or things need to be added to a class.

Ms. FOXX. Thank you.

Mr. Bennett, again, I will follow up with you on some very specific recommendations for the proposed industry-recognized process and ask for that later.

And I did want to make one comment to Mr. Hogan. I'm running out of time, but I would like to follow up with you, too, because I was a little surprised at the very low percentage of people who are graduates of your registered apprenticeship program who are working in your own business or in the shipbuilding. So I would like to follow up on that with you because I would have thought that you would be hiring a larger percentage, but there probably is a good explanation for that, and I'll follow up with you on it.

Thank you all again very much. It has been a wonderful hearing.

Chairman GUTHRIE. Thank the gentlewoman for yielding back.

I now recognize the ranking member of the full committee, Mr. Scott, 5 minutes for questions.

Mr. SCOTT. Thank you.

Mr. Hogan, did you want to respond to that? Because I thought it was just the opposite. You have a lot of people presently employed by the shipyard that went through The Apprentice School. Can you go through those numbers again?

Mr. HOGAN. Certainly, and that's why, in the follow-up, I was going to clarify what numbers the chairwoman might have been referring to. Today, we have -- we have just recently celebrated our 10,000th graduate from the apprentice program in those 98 years. We have over 3,000 of the apprentice graduates in the company today.

As I said, about 45 to 50 percent of our production management workforce is apprentice graduate, so, at 20,000 people, we have 750 on roll on any given year, and in graduating those, we're in the high 80 to 90 percent range up to 10 years after graduation that stay with the company.

So our numbers of retention of apprentices are very high. Just a smaller subset of our total employment population.

Mr. SCOTT. And one of the numbers I think was 1 out of 12. It is so popular; everybody want wants to get into it.

Mr. HOGAN. Yes. As I said, the application rate is about 2,400, 2,500 applicants a year for the 240 slots that we have. And several years ago, when the economy had really taken a downturn, we were running in the 5- to 6,000 range of applicants, but we kept it at about the 250 a year entry.

Mr. SCOTT. When someone graduates from The Apprentice School, what kind of credential do they get, and is that recognized in the industry?

Mr. HOGAN. It is a journeyman's certificate in whatever trade that they had served their apprenticeship in. For example, when I graduated from the apprentice program in 1980, I received a journeyman's certificate as a welder, and I could have stayed with the company, but I could have taken that certificate to most any industry and had it been recognized as a full-fledged journeyman in that trade, and that's still the same today.

Mr. SCOTT. Thank you.

Mr. Bennett, what's the difference between a registered program and an industry-recognized program?

Mr. BENNETT. Yes, in simple terms, a registered program governed by the Department of Labor is structured in terms of the amount of classroom time, as well as the on-the-job, earn-as-you-learn work experience whereas an industry-recognized credential -- if I give an example of the National Center for Construction Education and Research, they're a provider of curriculum to the construction industry all across the world, and what happens is, in those programs, when you complete your accredited -- it's nationally recognized. And the value of that is, regardless of where you go in the country, you're in a national database; you can be brought up in that database. So, if you come from California to Maine, I can look at where you are in your program development. You may have completed it. It would tell me that. You may have partially completed it, and you could pick right up where you left off with us from your previous employer.

Mr. SCOTT. If somebody wanted to start one of these, what would they have to go through?

Mr. BENNETT. To establish themselves, what they would do is work with the national center. You actually become -- you have to get your instructors certified. So there's a qualification process for getting your instructor certified to teach. You have to be an accredited center or work under an accredited center. It is very well governed in terms of its structure, policies, means, and methods that need to be followed, and then you begin teaching.

Mr. SCOTT. Is that process more or less complicated than registration?

Mr. BENNETT. In my experience, it is less complicated.

Mr. SCOTT. What do you have to do for registration?

Mr. BENNETT. For registration, you have to work with those individual States to get your programs approved, and this may not be a popular subject, but it is very political. We can -- just as a matter of fact, talked with a constituent of mine who tried to get their carpentry program approved. They were told you have to include framing and residential carpentry in your form building program, which are trades that they are skill sets within that trade that

they're never going to use. So, unless they put those skill sets in, they would not be allowed to be registered.

Mr. SCOTT. Mr. Hogan, is that your experience in the Virginia Manufacturers Association, complication in registration?

Mr. HOGAN. With the VMA, they have established with community colleges in the Commonwealth of Virginia a Manufacturing Skills Institute program, and that is tailored to multiple industries. It can cover something as wide, as specific as maintenance up to and including a machinist type program, and community colleges are equipped to offer the classes that are associated with that skills institute, perform the assessment, and then award varying levels of manufacturing skills certificates.

Mr. SCOTT. Is the registration process more complicated or industry recognition process more complicated, in your view?

Mr. HOGAN. We are currently registered through the Department of Labor at Newport News for our apprentice program, and, you know, we have been accredited since 1982, registered since then, as well. We don't find it to be overly burdensome and complicated. Once our programs are registered, unless we make some substantive change to them, we don't have to reregister the programs. It is fairly easy to maintain registration.

Mr. SCOTT. Thank you, Mr. Chairman.

Chairman GUTHRIE. Thank you. I thank the ranking member for yielding.

And I'll now recognize myself for 5 minutes for purpose of questions.

And, first, I'll make a couple of introductions to show, talking about Kentucky FAME, that it is in the highest levels of our Commonwealth and focus, is we have Leeann Veatch. She is here from the Governor's Office and shows our Governor's commitment to this.

And, Mr. Peglow, I believe you referenced your wife, and she is sitting right behind you here supporting you here today. So I would like to welcome my constituent here as well today. I appreciate you being here.

So I would like to ask you a question first, Mr. Peglow. You described how Kentucky FAME is structured so that you work 3 days while going to school the other 2 days. This is in contrast to other types of programs you mentioned, as you said, where you would first have studied 2 years, earn a degree, before going into the field of study. Why do you think the combination of work and study in Kentucky FAME is valuable, and what unique things do you think you have learned by being able to do work and study at the same time?

Mr. PEGLOW. I think going to work and school at the same time is very valuable because most programs that I have looked at other than this, you go to school 3 or 4 or 5 days a week full time. And most of the time, the job you do while you're in college is a part-time job other than what you're going to school for. This way, I get what I learn in school on Tuesday and Thursday; I can take to work Monday, Wednesday, and Friday, and apply it to everything that we do in work. And the companies and school has worked well together, and as we're learning stuff in school, we implement sessions and work to go along with the same things we're doing in

school. So, if we do machining, then we're also doing machining at work to kind of balance those out and help our education, I guess.

Chairman GUTHRIE. Well, thank you, that's very good. I toured a Kentucky FAME program in Owensboro and had similar sentiments from people who are working there and studying at the same time, so thanks.

So, Ms. Hughes, throughout your testimony, you emphasize the importance of Kentucky FAME being employer- or industry-led. What does this mean, and why do you think it is important?

Ms. HUGHES. Well, each chapter is directed by those employers that join it, and it is very important to them that they are active in the community and out recruiting in the community. But we as employers understand our needs better than anyone, and we can partner with the local school or community college to design the curriculum that we need. Obviously, manufacturers need to work together on this, instead of working separately, and working together, we have a larger voice within the community colleges to effect changes to the curriculum.

Manufacturing in any business, technology is changing fast, and if we need to make a change or add something to a class, add a new section, we can have that sitdown with the community college and have that conversation. And that's not to criticize a community college or a technical school. They're just simply not in our businesses every day, and they don't know how quickly the technology changes, but we are aware of that.

It also, like, as I said, gets the employer very involved in the community, whether that's out in recruiting -- I mean, we're going out to high schools, out to ACC schools, out in the community. We also recruit veterans coming out of the military. It gets us very involved in our communities in doing that. We're not only promoting the advanced technician program, but we are advancing manufacturing jobs in general, which is extremely important in our country. For so long, people think that manufacturing is dirty, dark, and dangerous, and that is simply not true in our manufacturers today, and we need to bring those young people and people back into manufacturing in our country.

Chairman GUTHRIE. Well, thanks. And, also, in our area, a lot of people may not understand what -- the Bowling Green area, but it is just north of Nashville about an hour, which is -- Nashville is one of the boom cities of the country, and I-65, so a lot of manufacturing is located in our area. Of course, Logan Aluminum has been there quite some time, but whenever I'm home touring it, and all of my area actually, the things you hear about, one, is access to skilled workers to come into work in the factory, which you are trying to address. But the other one is turnover. You hear that quite a bit from people in turnover. And I know that Logan Aluminum -- how is Logan Aluminum's apprenticeship program and being part of being Kentucky FAME helped you dealing with the turnover that so many other companies have to deal with?

Ms. HUGHES. Well, we have had very low turnover in our apprenticeship program over the last 30 years. It has been less than 6 percent, after they leave the program, they have stayed with our company. And one of the reasons for that, frankly, is Logan's culture. We have a very different culture from a lot of manufacturers.

We have self-directed work teams, and that causes a very low turnover because we offer -- they have a voice very much so in our business. We live by principles and things like that. So that's very unique to Logan Aluminum. And, historically, we have very low turnover for a manufacturer anyway.

But the investment that we are making in the individuals that go through Kentucky FAME's program is very high because our program is not just the 18 months they're in the program in school; they spend another year out on the floor as an apprentice before. And we pay for all of their education, and we also pay a very good salary while they're in the program to support them and their families. And we are investing about $200,000 per apprentice through that program. They recognize that. They know that we want them to have a career. This is not just a job for them. It is a career. And also a lot --

Chairman GUTHRIE. My time is kind of expiring. So I appreciate the answer. Just to be fair to the other questioners -- but thank you for your answer.

I will now recognize the Ranking Member Davis for 5 minutes for her.

Mrs. DAVIS. Thank you, Mr. Chairman, and thank you all so much for being here. We greatly appreciate it.

And I think, you know, we're trying to make some contrasts here, and in some ways, I'm not sure that contrast is necessarily there, but for clarification, Mr. Hogan, do you feel as if the apprenticeship school is industry-led?

Mr. HOGAN. It is. It is led by our current company as part of what has been a shrinking industry. The maritime industry has shrunk greatly in the United States in the 40 years that I have been in the business. You consider that there's not really any major, if any, commercial shipbuilding going on in the United States today. We are -- we used to be part of what was called one of the Big 6 yards, and now it is really down to two entities. General Dynamics has their three yards. Newport News has our three yards. And then there's, you know, a smattering of smaller yards through the Gulf Coast in the Florida panhandle area. And we are an industry leader in shipbuilding. So, in many ways, you could say that it is industry-led.

I'm very proud to say Huntington Ingalls, with our Pascagoula, Mississippi, facility, has the Haley Barbour Maritime Institute, which exists there, and they have done -- as we have been part of the same organization -- modeled some of their apprentice program after ours. Speaking with Representative Courtney earlier, and General Dynamics electric boat is reconstituting their apprentice program as part of the ramp-up that we see in defense and shipbuilding in this Nation.

So, you know, it is kind of an either/or. You can say we're company-led or you can say we're industry-led because it is a much smaller industry than perhaps automotive, food, other manufacturing industries in the United States. Does that answer your question?

Mrs. DAVIS. I think so. You know, if I were a parent and I was with my son or daughter -- and you do a very good job recruiting women, which I think is admirable, and certainly we want to make

sure that continues to grow -- and I'm trying to figure out, you know, the differences here, and as I understand it, there are many registered apprenticeship programs that then allow someone to qualify for an industry recognition certification. So is there -- you know, the cart before the horse. How does that work?

Mr. HOGAN. Well, certainly, an apprentice from another company or even industry would have some recognition in our company, but they would not hold the same certification that a Newport News Apprentice School graduate would have. We have a very strict curriculum. It is a mix of both -- we like to call it the three pillars are craftsmanship, scholarship, and leadership. It is modeled very much after the Naval Academy's approach. So, and I think Mr. Peglow, you know, hit it on the mark when he talked about it is the right mix of scholastic work along with your craft work at the same time, and then we add in the leadership component to it whereas others, even where they're industry-led, whether they're not registered, they're often focused more just on the craft portion of it. And there's nothing wrong with that. We just find it being the combination of those three that we have in place to really help create the leaders of the future in shipbuilding for Newport News.

Mrs. DAVIS. Is it your understanding then that the fact that -- where does the added value come from? You mentioned the leadership, which I think is critically important but may not be something that industry cares about. But is it the registration part of the program that gives that added value?

Mr. HOGAN. The registration part is flexible enough where it allows us to focus on those three components of it. It doesn't restrict us to one. It does allow an industry point of view that we're able to put into our programs, and we have found it to be, as our president -- previous president and current president -- has termed it kind of our secret sauce at Newport News in the right makeup of those three aspects of it, and we have just found the right balance of that to create both future craftsmen for the company but also future leaders.

Mrs. DAVIS. I wonder, maybe -- thank you, Mr. Hogan -- because our time is limited, but, Mr. Bennett or Ms. Hughes, do you want to comment? I mean, is there something about that people might inquire of Kentucky FAME and say, you know, it sounds like you're doing a lot of those same things, but you seem to want very much to want a distinction between the programs? Did I understand that right or --

Ms. HUGHES. I don't know that we make a definite distinction. The Kentucky FAME AMT technician is not a registered program. However, we do have member companies who do have registered programs, as well. The reason that I think Kentucky FAME is so unique is that it has flexibility for employers of all sizes. Mr. Hogan comes from a very large employer, and in Kentucky, I come from a larger employer, but an employer that has less than 100 employees, which many manufacturers do, I think this is an option for them because they can come and have a -- sponsor a student, maybe one student every other year, and still be a member of a chapter, and they do not -- they won't have the resources at their facility possibly to do a registered program with the application process and so forth. But the Kentucky FAME program offers them

a very standardized program that the student comes out with an associate's degree and then is mentored at their facility specific to their needs at that facility.

So I think that's the distinction there because of the flexibility, but we do have member companies, such as some of the ones in Louisville, Ford, and I believe there's a couple of others who do have registered apprenticeship programs as well as being a member of the Kentucky FAME.

Mrs. DAVIS. Thank you.

Chairman GUTHRIE. Thank you.

Thank you for yielding.

And I now recognize Mr. Byrne 5 minutes for questions.

Mr. BYRNE. Thank you, Mr. Chairman.

When I was the chancellor of the postsecondary system in Alabama, I was also the chair of the Workforce Planning Council. So I got to deal with a variety of training programs. And I was real proud of the FAME programs we had in the 2-year college system, but we frequently had a hard time getting enough students to participate in our construction trades, that really didn't work in the sort of academic environment of a 2-year college, even a technical college.

So apprenticeship programs seemed to work particularly well in the construction trades. That's where we could attract people because they could work while they're getting their training. That seemed to work pretty well. So I welcome the President's executive order. I think it is great. But there's that provision in section 4 that says that the Secretary can exclude an industry if it already has an effective and substantially widespread program. Well, if you excluded the construction industry, I'm afraid we would exclude an industry that almost by its nature has to depend upon apprenticeship programs to get their students and to get the training.

So, Mr. Bennett, I would like to ask you to respond to that, if you could.

Mr. BENNETT. Yeah, we have reviewed that executive order, and, you know, our sentiments are I think it is very premature at this stage to exclude anything, given the demand that we face today: 500,000 skilled worker shortage. The infrastructure bill that, should that pass, could go anywhere from another 4- to 600,000 that they're predicting by 2020. The apprenticeship model in its current state will not get us there, and I think what's misunderstood sometimes is when we hear that term "apprenticeship," it is not a siloed approach.

The construction industry has been training and developing a workforce since its infancy, and it hasn't just been through registered apprenticeship, and that understanding is -- I don't think is very well understood in the country, and our company, we provide both. We have registered apprenticeship programs that meet State licensing requirements, but more so, we have industry-recognized development that is going on for our workforce, and it is significant to our success.

And the distinction between those two is the industry-recognized programs are much more nimble. It allows us to adapt quickly to the needs of our clients, and we're not interested in sacrificing rigor, relevance, or safety. We can't afford to. This industry today

is too dynamic and too sophisticated for us to cut corners, so we're not looking for less as we look to compress, right, that developmental efforts. And so when we're looking at this executive order, I think it is very premature to exclude anything right now. I think we need to look at what is working, how do we enhance those models, and how can we expand upon what else is going on in the industry, because, my opinion, that by itself is not going to allow us to get to that 500- or a million number.

Mr. BYRNE. Well, I'm really glad you brought up the infrastructure program. Because I was talking to the Secretary of Transportation the other day, talking about her sort of vision for that. I know the President's vision for that. It's ambitious. And I want it to be ambitious. I think it's good for the country.

But I told her, I said, I'm worried about finding the workforce to build all that infrastructure. We lost a lot of that workforce during the recession. I'm telling you what you already know. And you can't just rebuild that workforce overnight. We've got to attract people into the programs and get them, you know, into the apprenticeship programs.

So I hear what you're saying is, look, not just for the health of our industry, but if we're really going to be serious about a major infrastructure program for America, we have to think about all sorts of different ways of creating that workforce to build up to what it would take to do that.

Ms. Hughes, I want to ask you a question. Registered and unregistered, to the average person out there, what's the difference? So in plain, layman terms, so even somebody like me can understand it, what's the difference, what's the substantive difference between the two?

Ms. HUGHES. I have been in HR since 1999, and I can tell you, I've reviewed many applications. And I would view them, if someone has a registered apprenticeship, a journeyman, or someone who has an associate's degree in industrial maintenance, I would look at them the same. Because I think that having that education and then the job experience that goes along with it has to be important.

So I don't see that there's much distinction. Obviously, I know legally a registered apprenticeship has to be registered with the Department of Labor. I understand that.

But there are many people that are in hiring positions in industry, certainly in the Commonwealth of Kentucky, who don't necessarily recognize -- not necessarily recognize, but don't see a distinction. They're looking at whether that person can do the job, whether they have the job experience.

That associate's degree would be helpful. But also, if someone doesn't have that, if they've got 30 years' experience in maintenance or welding, whatever it might be, we're going to hire that person without a certificate or not.

Mr. BYRNE. Thank you.

My time is up. I yield back.

Chairman GUTHRIE. I thank the gentleman for yielding back.

And I now recognize Mr. Courtney for 5 minutes for questions.

Mr. COURTNEY. Thank you, Mr. Chairman, for holding this hearing, and to the witnesses for really interesting testimony.

Again, I particularly enjoy this topic because we're talking about the Registered Apprenticeship Program, which is also known as the Fitzgerald Act. And Fitzgerald actually was the Congressman from the Second Congressional District of Connecticut back in 1937, 80 years ago, when it was passed into law and signed into law by President Roosevelt.

I actually asked the House Historian to pull up a picture of Congressman Fitzgerald. He's the good looking Irish guy on the left over there and a really interesting Member.

He actually was a foundry worker, Mr. Peglow, who worked his way up through a company, Richmond Radiator, in eastern Connecticut, became a superintendent of the company, worked for the State Department of Labor setting up apprenticeship programs in the 1930s, during the Depression, and then was elected to Congress in 1936.

Passed this law in his first term in office, which is not bad, to have, again, an act named after you and have on the books for the last 80 years. Left Congress after serving only two terms and became the head of the War Production Board in Connecticut during World War II. Electric Boat built 74 submarines during World War II. And I know your shipyard in Virginia did the same. And it's interesting because a registered apprenticeship program was folded into the War Production Board.

So the notion that we can't scale up the Registered Apprenticeship Program for a large undertaking -- which, again, whether it's infrastructure or shipbuilding -- I mean, the fact of the matter is that, you know, Mr. Fitzgerald showed you can do it and you can do it with high-quality apprenticeship programs with real standards.

Again, we built a 5,000-ship Navy in World War II, which is staggering when you really look at we have a 272-ship Navy today. So really it's a question of just how do we look at this, with the benefit of hindsight to some degree. And I think a big part of it is just, again, make sure that we think big and we also recognize this is also about resources.

Again, we have another slide which, again, lays out what we're doing budget-wise in terms of apprenticeship programs. In the fiscal year 2017 budget, which was a bipartisan budget that we just passed, $95 million, the Apprenticeship Accelerated Grant Program, which, again, companies in my district and other parts of the country are taking advantage of, which provides, again, about 3500 per employee to entice businesses to join the apprenticeship program.

Unfortunately, as was mentioned by Mrs. Davis, it was zeroed out a couple weeks ago in the Labor-H appropriations bill, which is really kind of totally at odds with the executive order which was just issued.

We also saw the WIOA grants, the Workforce Investment Opportunity Act grants, cut. Again, that was a bipartisan bill, the Workforce Investment Opportunity Act that was signed into law in 2014.

Again, that's going in the exact opposite direction of the topic that we're talking about here today. The fact of the matter is we want to encourage and entice employers to participate in these pro-

grams, and taking these resources away is just sort of going in the opposite direction.

So, Mr. Hogan, again, up at EB what we're seeing with the ramp-up of submarine construction is we're getting a lot of small suppliers who are also having to ramp up, because that's going to be a big part of the model in terms of getting there. And is it your experience that some of these suppliers in Virginia are also really looking to apprenticeship programs to meet the demand?

Mr. HOGAN. Yes, sir. I have seen that both with my work with the VMA and as a previous position I held at Newport News supply chain management head. We see the same thing across the industrial base.

And we're dealing with manufacturers who aren't just solely shipbuilding, maritime-related suppliers. They supply on the commercial market, the construction industry, a wide variety of areas that they supply to, and across the Commonwealth of Virginia.

And I've seen it, because we have suppliers, basically, in 50 States across the Nation, very similar situations. And many of them at all scales of size of the companies are looking for programs that currently exist that they can participate in. If not, what does it take to do it in their company?

And, oftentimes they don't have the same benefits that I do in a large company and the training and infrastructure we have in place to do those. So many companies are struggling today to find a model and funding associated with it.

Mr. COURTNEY. Thank you.

So, Mr. Chairman, I just want to enter a letter from Collins and Jewell Company in eastern Connecticut, who is one of those suppliers. I'm just going to read two sentences real quick.

"We, at first, were very reluctant to get enrolled into the apprenticeship program as we were under the misconception that apprenticeships was a very difficult process for small employers. We as small employers typically connect apprenticeships to unions or very large employers. We were surprisingly relieved that the process was not nearly as daunting as imagined."

And I think that's something that will continue to reverberate out there if we get those incentives in place.

With that, I would ask that it be entered for the record.

Chairman GUTHRIE. Thank you. Without objection, so ordered.

[The information follows:]

Collins & Jewell Company
INDUSTRIAL INSTALLERS / CUSTOM FABRICATORS
A Proud Connecticut Corporation For More Than 60 Years

5 Rachel Drive
Bozrah, CT 06334
Ph. 860-887-8813
Fax 860-886-5359
www.collins-jewell.com

Congressman Joe Courtney
Representing Connecticut's 2nd district
2348 Rayburn HOB
Washington, DC 20515
Phone: (202) 225-2076

7/25/2017

Congressman Courtney,

I wanted to reach out to you and express my deep concern regarding the elimination of the apprenticeship line item from the upcoming budget cycle. As the owner of a small manufacturing business of 75 employees in Eastern CT and given this is a program we just started to get involved with, the elimination of it will considerably impede one of our main solutions for the skills gap problem in our industry.

We at first were very reluctant to get enrolled into the apprenticeship program as we were under the misconception that apprenticeship was a very difficult process for small employers. We as small employers typically connect apprenticeship to Unions or very large employers. Once approached about the program we were surprisingly relieved that the process was not nearly as daunting as imagined. We could utilize our current job descriptions to create a training program that included on the job with classroom training and thus within a few months, we had an approved apprenticeship program and had five employees enrolled. Understand that this five of our total 55 employees active in the trades represents just under 10% of our workforce which is a substantial start.

The training money we receive through this program allows us to take a chance on an employee that we feel is ready to make the next step in their career path to a skilled tradesperson. Without these funds, we will be more reluctant to take a chance on those employees which will not only impede their professional growth, but also the growth of our company. I ask you to do whatever in your power to reinstate this program to full funding levels as we are just now getting traction with other small manufacturers to take advantage of this skills gap solution.

As a country, we want to focus on manufacturing our own goods by having things "Made in America"; elimination of the apprenticeship program, in my opinion, flies in the face of that goal. We need to garner excitement in today's youth that manufacturing opportunities are careers and not just jobs. Having an apprenticeship program clearly reinforces this goal. Please feel free to contact me at any time with any questions or concerns you may have regarding this. I thank you in advance for your consideration of this very important issue to the manufacturing world.

Best Regards,

Christopher Jewell
Collins & Jewell Company
860-887-8813

Mr. COURTNEY. Thank you. I yield back.

Chairman GUTHRIE. Thank the gentleman for yielding back.

I now recognize Ms. Stefanik 5 minutes for the purpose of asking questions.

Ms. STEFANIK. Thank you, Mr. Chairman.

Mr. Peglow, thank you for your excellent testimony today. You talked about your experience in school, and you graduated in 2014. Is that correct?

Mr. PEGLOW. Yes, ma'am.

Ms. STEFANIK. I'm curious whether you felt you had adequate opportunities when you were in high school, before you moved on to college, to have vocational education and internship opportunities.

Mr. PEGLOW. Yes, I did. We had a welding program at our school. Welding and masonry were the two major parts of it.

Then, in high school, I wasn't really focused on what I wanted to do afterwards, and I didn't have an interest in manufacturing or the welding programs. In high school, I was actually headed down the path of culinary chef and totally changed when I got out of high school.

But speaking of Franklin Simpson High School, we had ample opportunities to do different career paths. And I know Logan High School and a couple other county high schools have more advanced programs. But most all the schools in the area have very well programs.

Ms. STEFANIK. So do you think, in retrospect, connecting those programs to workforce opportunities after graduation would have helped you sort of develop the path and see a bit into the future?

Mr. PEGLOW. Yeah. I believe they would have helped a little bit.

Ms. STEFANIK. The reason why I ask that question is we have some great high school workforce development programs in my district through BOCES, and they partner with local employers so that there's a direct pipeline from students at the high school level who are learning these technical skills and immediately will have employment opportunities so they can see what they're learning in the classroom, in a hands-on way, how that actually translates to jobs. So I just wanted to get your experience. But thank you for your testimony.

Mr. Bennett, I wanted to ask you a few questions. In your testimony you noted that the construction industry makes up the largest segment of registered apprenticeships. Industry-wide, could you share what percentage of construction industry apprenticeships are registered versus not registered?

Mr. BENNETT. I would have to follow up with you on what that exact number is. I don't want to misquote statistics for you this morning.

Ms. STEFANIK. Okay. I look forward to that follow-up. But there definitely is a mixture between registered and unregistered. Is that correct?

Mr. BENNETT. Yes.

Ms. STEFANIK. Could you describe some different types of the industry-recognized programs?

Mr. BENNETT. Sure. I can give you an example of welding personally from our own company. We produced the largest oil refinery

expansion in this country in 40 years. And when we went into that project, we needed 250 pipe welders.

And what you need to understand in the construction world is jobs take a long time to develop. They don't just happen. It takes time to evolve. And so you don't just have a bench full of people waiting to go to work. You have people that are working and those resources are being deployed in other areas.

So when this job came up, 250 welders needed, we needed to look at how we were going to staff that project. We had internal resources, but we also knew we were going to have to recruit and develop these individuals.

And we worked with external professionals to understand, how could we go about this? And we were told the traditional model of pipe welding is you become a structural welder, you need to apply those skills, you come back in, and you begin to learn pipe. And we didn't have that kind of time on our hands.

And we developed 250 pipe welders in 12 weeks, in a competency-based program that is industry recognized, both certifications, the weld certifications that they possess. And we successfully built that job, on time, under budget, against two other contractors in the country, and we outperformed both of those contractors.

And of our welding metrics as we watched the cyclicalness of jobs can come and go in terms of your workforce needs, and one of the first downturns on the project, which is driven by many things, material, engineering, the first thought would be, well, you're going to let your new folks go first and keep your veterans. Of the top 15 welders on that project, 14 of them were graduates out of that program who had never welded before.

So the model can work. And when we look at the distinctions, it's not that registered apprenticeship doesn't work and that it's overly burdened. It's there. It's been very effective for many, many years. But there's also this model of industry-recognized programs that also works. And it's highly effective. And, again, it contains rigor and relevance and safety. And that's what's important for me to get across today, is both models can work and the country needs both models.

Ms. STEFANIK. Thank you. I think that's an incredibly important point. And that anecdote highlighted the effectiveness and the efficiency of the program that is recognized at the industry level.

My time has expired, but thank you to the panel. It was excellent testimony across the board today.

Chairman GUTHRIE. Thank you for yielding back.

I now recognize Ms. Adams for 5 minutes for questions.

Ms. ADAMS. Thank you, Mr. Chairman and Ranking Member, thank you for holding this meeting.

And to all of you, thank you for your testimony. It has been very inspiring. And as a former educator, certainly it's something that I have a personal interest in.

Everyone knows that the benefits of apprenticeships are really good. They provide our workforce with the skills that they need to undertake the jobs of the future. They put our workers in a position to enter the middle class with stable, good-paying jobs. And they bring the potential for advancement, and they can provide an

alternative path to obtaining a 4-year college degree for young adults who can't take on the burden of student debt, which is really a serious problem.

Mr. Bennett, let me ask you first, you challenged the Registered Apprenticeship Program as being too rigid, too focused on a time component. It's my understanding that under current rules registered apprenticeships can be time based, competency based, or a mixture of both.

In the college context, we've seen what happens when we give Federal resources to low-quality schools that provide no value to students. So are you concerned that opening up Federal resources to entities with much lower quality and safety priorities than Cianbro may lead to supporting apprenticeship programs that don't help participants or harm the reputation of apprenticeship programs?

Mr. BENNETT. That's a great question. The answer to that, no. From our organization and association, we have absolutely no interest -- and you've heard me say this morning -- in less rigor, less relevance, or less safety focus. We cannot afford to.

Our clients today demand that you're able to put their work in place safely. In fact, they set standards on if your recordable incident rate isn't at a certainly level, you're not even allowed to bid on those projects.

And so not only morally is it just our responsibility to ensure a safe workplace for our team members, and their loved ones certainly deserve to know that when that loved one leaves home and goes to work that they're going to work someplace that is safe. That is our moral obligation. So when we look at compressing the development efforts of our workforce, absolutely, we do not want or expect that rigor, relevance, or focus on safety should be watered down in any manner or fashion.

Ms. ADAMS. So when you say an all-of-the-above approach, what do you mean?

Mr. BENNETT. Well, an all-of-the-above approach, what we mean by that is let's not just focus on developing or attacking the skill shortage in this country with simply registered apprenticeship programs. There are multiple pathways just like we have in our educational system for students. You can go the traditional high school model. You can enter career and technical education. There should be multiple pathways, just like we have for our students, for folks that want to develop these professional trade skills.

Ms. ADAMS. All right. Thank you very much. Let me move on.

In the 12th District of North Carolina, Siemens has seen remarkable success with their apprenticeship model, partnering with Central Piedmont Community College to sponsor high tech and European-style apprenticeships, manufacturing gas and steam turbines for power plants.

Mr. Hogan, I was interested to read about your experiences with the apprentice school. You have a fine record of preparing students for the jobs for tomorrow. And you mentioned the schools' partnership with local community colleges. Could you elaborate on how Newport News Shipbuilding engages students in these institutions as well as K-12 students who are looking at community colleges as an option?

Mr. HOGAN. Yes, ma'am. We actually have two models from a workforce development perspective. One is through the apprentice program. And the majority of our scholastic portion, academic portion of the program, is taught by onsite instructors employed by the apprentice school.

I think somebody asked me one time, what about dual enrollment classes? If somebody took a high school class, dual enrollment with a local community college, we would take a look at that relative to their transcripts and requirements in the apprentice school, and we may waive the requirement for them to take one of those classes if it was dual enrollment.

Most of our association with the community colleges is through our normal workforce development for the remainder of our employees in the company, which is the larger population. And we use a variety of things: tuition reimbursement, where a person can go to school on their own time and the company is willing to pay for them to get something that is applicable to their work in the shipyard.

As well, we have established specific programs with community colleges to focus on workforce development for Newport News. In fact, years ago I participated in a program myself and received a 1-year industrial management certificate from the local community college in my very early stages of my career.

Today we utilize them in what's called an hourly leadership development program. So our union-eligible represented workforce can go use a community college with the classes paid for by the company to equip them for those both academic and leadership classes.

Ms. ADAMS. Wonderful. Thank you very much.

I'm out of time. Mr. Chair, I yield back.

Chairman GUTHRIE. Thank you for yielding. I thank the gentlelady for yielding.

And I now recognize Mr. Smucker for 5 minutes for questions.

Mr. SMUCKER. Thank you, Mr. Chairman.

I very much am pleased that the chairman has chosen to conduct the hearing on this particular topic, I'm pleased that it's a priority of this committee, because I think there's so much potential for us.

And, Mr. Peglow, thank you for being here. It's a wonderful story, shared by so many, myself as well. So I would be what you consider a nontraditional student. I did construction at night, hanging drywall to earn my way through high school, actually, and then after that operated a business and went to college at night.

So the idea of earn while you learn is something that I experienced. And the construction company I owned, we had about 150 employees. And so I have a very special affinity for those who choose construction as their career. And I'm also fully aware of the many wonderful opportunities there are in the construction trades.

But our problem always was, always, the number one thing that hindered our growth was finding qualified people to fill the spots that we had available for those great family-sustaining jobs.

And so I just think apprenticeship is a model that begins to solve not only the issues of finding people for jobs, but provides so many great opportunities for people all across the country and gets to other problems that we talk about as well, like college debt and

many other things. And so we'd never discourage a 4-year degree for anyone, but we just want people to understand there are so many other opportunities available. We want to work for those.

You know, I hear the discussion and specifically some of the comments made by the ranking member that I agree with so much, that we all want a program that is prestigious, a program that means something, when you come through that program, you have some certificate, you have some certification at the end that you can hang on to and know that you've achieved something.

And that's important not only for the student, but it's important for parents. And I think the ranking member mentioned that it needs to be a program of value. So we must have high-quality programs.

And it's interesting to me, I hear all the discussion about registration. There's a lot of discussion about that. To me, that feels -- we agree on so much of this, there really isn't much contrast. That registration, to me, is like talking about building a building and you're arguing about the color of the doorknobs. I mean, literally.

What we want is programs that are quality. We want a certification at the end of that product. And, unfortunately, what happens with registration is some people who currently have registered programs have put a lock on that doorknob and have kept other companies, they've used it as a barrier to entry to training employees.

That's the problem we have with registration. If we can come up with a system that you can readily get approval for, I don't think anybody would argue with registration.

So I think there are a lot of ways it could be done as well. We just want to ensure that there's a strong system in place. Whether it's done the way we currently do it or whether it's done through industry certification, you have to have a strong system of recognizing and holding accountable to ensure that we have quality programs.

One of the models -- and maybe, Ms. Hughes, I'm really fascinated by what you've done by Kentucky FAME, and I appreciate the chairman sharing this model with us. It seems outstanding.

But could we look to other areas of higher education as some model? You have a lot of different institutions. They're accredited in different ways. Is there anything we can learn from that in how we register our programs?

Ms. HUGHES. Yes, I think we can. I think that looking to what the community colleges are presently teaching and so they understand what the industry needs and are those classes up to date. I think it's a partnership between those two groups, whether that's a banking business, whether that's culinary, because our local schools teach that, making sure that they are up to date and teaching those things.

The one thing that's wonderful about Kentucky FAME is that it adds that personal behavior, soft skills piece to that, as well as the safety, the manufacturing core classes, such as workforce organization, that type of thing. So I think that's important.

Looking at other colleges and universities, as well, for co-op programs and internship --

Mr. SMUCKER. I'm going to jump in. And I'm sorry, I talked too much. I have a lot of additional questions. But one thing I really like about what you're describing at Kentucky FAME is how businesses are engaged.

Ms. HUGHES. Very engaged.

Mr. SMUCKER. And it's an aspect of the apprenticeship program that I think holds so much promise. It's a way for businesses to really engage in not only hiring employees, but in the development of those employees. And it's a model for them to do that.

So I wish I had more time. But I look forward to speaking with all of you to learn more about your programs.

Chairman GUTHRIE. I thank the gentleman for yielding.

And I now recognize Mr. Krishnamoorthi for 5 minutes.

Mr. KRISHNAMOORTHI. Thank you, Mr. Chairman, and I really applaud you calling this hearing today with the ranking member. It's definitely a topic that both sides of the aisle are very interested in, and I think we can really work together to strengthen your ability to offer apprenticeships.

And thank you, Mr. Peglow, for coming in and talking about the real world impact of apprenticeships, because I think more people need to hear from people like you, quite frankly.

My first question is, recently the House passed a bipartisan reauthorization of the Perkins Career and Technical Education Act. It was not only bipartisan, it was unanimous through the House of Representatives. I was proud to be the co-lead for that legislation, along with my colleague, Republican Congressman Thompson from Pennsylvania. And one of the improvements that bill made was to align CTE programs with workforce needs and support work-based learning opportunities which may, of course, include apprenticeships.

So my first question is to Mr. Hogan. You know, as a member of the business community, sir, what do you find to be among the most meaningful ways to engage with the community's local CTE programs? In other words, do you actively work with the local community colleges in trying to fashion their curriculum to suit your needs? And how can the Federal Government help in those efforts?

Mr. HOGAN. Certainly. What I would say is in addition our world class apprentice program that I talked about, the rest of our training for the remainder of the workforce is handled through a special department or division that takes care of all the trades-related training.

That group, as well, is connected with what we call our Career Pathways Program, which then is linked to both our community colleges and our local high schools, all the way K-12, is how we're linked up there. Because what we recognize is, is that is a feeder to the workforce of the future. Not everyone will get into the apprentice program, but that doesn't discount them as potential highly skilled first-class shipbuilders for Newport News.

So our linkage to CTE is through a special program that we have called Career Pathways.

Mr. KRISHNAMOORTHI. Thank you. I appreciate that.

I wanted to highlight one program in my own State which is basically based at a company called Aon, one of the world's largest insurance companies. And basically what they did is they created

an apprenticeship program in insurance and risk management, one in information technology, and one in human resources.

And these apprentices get paid competitive salaries. They're offered full employee benefits. They get on-the-job training. And they get paid tuition at partner schools to get an associate's degree as well.

In addition, they get a labor-certified insurance apprenticeship, both of which are transferable outside of Aon.

And so one question I wanted to ask Mr. Bennett, with regard to these registered apprenticeships I think that part of the argument for having them is that they ensure a certain level of quality across the board. And so we can ensure that our children and students and others who are perhaps in career transition, who engage in these apprenticeships, are able to get something that really can transfer around the country, because everybody can trust in it.

So I'd like to ask you, like, what do you see as potential benefits of having a registered apprenticeship, setting aside for a moment your concerns about the actual registration process? But do you agree that having a registered apprenticeship is a good thing nationally?

Mr. BENNETT. I mean as a company, as I stated, we provide both. There's value to both. But there's a reason why we offer both.

And so the registered program, the way they're structured with classroom time and on-the-job learning, is very valuable. And our nonregistered programs are set up very similarly, but they also lead to having credentialing, because, as I said, we're not interested in having something with less rigor, relevance, or safety focus.

So there is a credentialing process. In fact, it's as strict, if not more strict than an apprenticeship model, where there's a knowledge verification, a written test of understanding the technical knowledge. But there's also a performance verification where you have to demonstrate that competency before you're issued that certification.

So it provides that same level of comfort for our students that, as they're progressing, we know that they've not only mastered or understand the technical aspect of it, but they also know how to apply the learning.

And so there's value for us in both of those. So I don't want to be misunderstood this morning that I'm pitting one against the other. That is not my position or the association's position. But it is simply there is more than one way to get to the end.

And it's that recognition of these nonregistered programs that we have to do a better job at educating our lawmakers on and the industry on, because it's very valuable and it's been very successful.

And we work with the technical high schools, a significant number of them, not only to help purchase curriculum books, but we sit on their advisory councils, we help develop the curriculum, we provide internships, paid internships, to put our money where our mouth is.

It's important. That is our future. And, again, we can't afford less rigor, less relevance, or any less focus on safety.

Mr. SMUCKER. [Presiding.] Thank you.

Mr. KRISHNAMOORTHI. Thank you.

Mr. SMUCKER. Thank you.

I would now like to recognize Mr. Grothman for 5 minutes of questioning.

Mr. GROTHMAN. Thanks much.

We'll start with Mr. Bennett, and we'll finish with Mr. Bennett too.

I want to talk a little bit about the apprenticeship program and the percentages, apprentice versus journeyman. There are restrictions in the number of apprentices you can hire per journeyman. Can you give me some examples of a job where it would be appropriate to hire more apprentices than right now for a journeyman?

Mr. BENNETT. Sure. So maybe to kind of help set the stage.

Mr. GROTHMAN. Maybe explain the rule a little bit.

Mr. BENNETT. A ratio may be you can have one apprentice or helper to one journey-level tradesperson. There are situations with many trades where that might be understated in terms of the conditions of the work, the hazards associated with the work. There are opportunities where a journey-level individual could oversee, very safely, more than one individual.

In the same token, I can give you examples of where it is absolutely the correct thing to do to have a one-to-one ratio given the hazards associated with the work that needs to be performed. But there are many cases where you could have more.

So what that does to us, the restriction that puts on us, is we can only develop so many based on how many journey-level craftspeople we employ.

Mr. GROTHMAN. You think sometimes you should be able to hire three apprentices for every two journeymen?

Mr. BENNETT. I think there are situations where you absolutely could do that, yes.

Mr. GROTHMAN. Okay. Are there enough people out there that if you could hire more, you would? I mean, I guess I can think in my own mind there are two reasons why we don't have enough people in trade. You can say just not enough people are going in. But you could also say, from what you're telling me, that if you could, on individual jobs, hire another couple apprentices, maybe you could get people through the program quicker.

Could you comment, do you believe we could get more people through the program if you could sometimes hire more apprentices?

Mr. BENNETT. I believe you could. And that's one of the distinctions between what are the restrictions in a registered apprenticeship program? That would be one of them. Compared to or contrast that with a nonregistered program, we don't have to have that ratio.

Mr. GROTHMAN. Okay. In your testimony, you referred to unnecessary requirements of registered apprenticeship programs that sometimes waste taxpayer money. Could you give me examples of that and what you think we could do to improve things a little?

Mr. BENNETT. Well, I can, without opening up a can of worms.

We're a Federal contractor, and we perform work under the Davis-Bacon Act. And on those projects, just hypothetical, if it was a $30 million project, and let's say the contract required that for every million dollars' worth of work you had to have an apprentice.

Typically, an apprentice, let's just hypothetically say, is making 50 percent of that journey-level wage.

If you don't have a registered apprenticeship program, that work still needs to be performed. You would end up putting journey-level professionals in those apprenticeship spots and you will pay the journey-level wage on those projects.

Where that ends up becoming expensive to the client, the State, the Federal Government, is you're paying wages for journey-level folks in an apprentice-level program that's unnecessary, and you're not developing the future workforce.

And sometimes we hear that the registration process can be fairly simple. In the same terms that there are jobs that take a long time to develop, there are also projects where we're reacting today and sending people to another State in this country to go to work, and we may not be registered in that State. In fact, we may have never worked in that State before. In the time that it takes to get something registered, that's where some of the hurdles come in for us as a national contractor.

Mr. GROTHMAN. Okay. I'll give you one more question here.

You talked about -- I'm sorry, Cianbro? Is that how --

Mr. BENNETT. Cianbro.

Mr. GROTHMAN. Cianbro. Okay. And the things you do to ensure worker safety, and they're all excellent qualities to have in a business, and it's fair to say we need more companies like yours.

That being said, you were also particularly critical of the rigidity of the Department of Labor's Registered Apprenticeship Programs and the fact they frequently do not meet the needs of industry. Could you elaborate on that a little more?

Mr. BENNETT. Yeah. Some of the rigidity that's within those programs in terms of the time, what consists of a registered program.

So in our world, as an open shop contractor, as we develop a skilled craft professional, that individual -- I'll just use carpenter as an example -- when someone goes through our program, that carpenter is also going to be provided with equipment operation skills, either to move material from point A to point B. They're going to be taught equipment operation skills that might allow them to access a work area like aerial lifts. They could also be taught rigging skills, because that material that they need to move needs to be rigged in such a way that it's done safely and can be moved safely.

In our world, that is what a skilled program would look like and consist of. It's not a one-dimensional, that carpenter needs finished work, framing, but they're going to be a form carpenter on a bridge.

So there are restrictions within there where there are things that we have to teach, which costs money, it takes time and energy, that will never be applied on a project.

Mr. GROTHMAN. Okay. Thank you very much.

Mr. SMUCKER. Thank you. The chair would just ask the witnesses to watch the clock. Intend to finish a question, but be aware of the time limitations.

Mr. GROTHMAN. It was the Congressman's fault. I tricked him.

Mr. SMUCKER. All right. Now I would like to recognize Mr. Polis for 5 minutes of questions.

Mr. POLIS. Thank you, Mr. Chairman.

You know, apprenticeships like we've discussed today are a critical tool in connecting Americans with good-paying jobs and lifelong careers to support themselves and their families. And the topic of apprenticeship is a very relevant one.

It's also not a new one. For years, of course, unions in Colorado and many other States have been leading the way to connect people with apprenticeship programs to provide quality education and on-the-job training.

Trevor Keller is one example. Joining the IBEW apprenticeship program gave Trevor the opportunity to get paid in the classroom while also receiving a comprehensive education and onsite training. They aren't just given an instruction sheet and told to operate without first knowing the mechanics and science behind electrical work.

On top of classroom education, apprentices also are paid a living wage while working on the lines. Trevor is confident after finishing the IBEW apprenticeship that he has the skills and dollars to continue to his career as a journeyman.

Mr. Hogan, thanks for joining us. I think a key part of Trevor's story is that quality apprenticeship programs aren't just on-the-job training programs, they're also education programs. Can you share more about Newport News Shipbuilding's education program and how you combine traditional learning with skills training?

Mr. HOGAN. Certainly. At Newport News, as I said, it's a mix of the craftsmanship, the scholarship, and the leadership.

On the academic portion of it, students, when they start the apprentice program, very similar to what Mr. Peglow demonstrated, is they may go to classes 2 or 3 days a week, and the remainder of that week would be on-the-job training.

They take classes everywhere from the mathematics, algebra, trigonometry, geometry, calculus. Then we get into more shipbuilding-related things like marine design, naval architecture, marine engineering. We do physics. We run the gamut of very high requirements in STEM-type classes.

And that is part of the preparation not only for them to become a better skilled worker in our company, but then that also does marry up with the leadership component of it. So that they are not only just leaders in the company, but they are leaders within their trade discipline.

Mr. POLIS. Mr. Bennett, thanks for joining us as well. You mentioned in your testimony your company is 100 percent employee owned. And I'm excited your company has employees and employee ownership that can benefit from the value being created.

I recently introduced a bill, the WORK Act, that encourages employee ownership as a business structure. Can you share more about your company's decision to be a 100 percent employee-owned company and how that is consistent with your values and your apprenticeship program?

Mr. BENNETT. Sure. I mean, it goes back many, many years now. But our philosophy is treating people with dignity and respect.

And the founders of the organization made a very conscious decision that the people that helped build the organization and make it successful should reap the benefits of that. And so many years ago we converted to a 100 percent employee-owned organization.

And where that adds value is our team members believe they have skin in the game in every single decision that they make. We choose to work safe, we choose to look out for one another, give back to our communities.

And so that whole culture that we've established goes all the way back to our founders and our values.

Mr. POLIS. Thank you.

And, Mr. Hogan, you also mentioned that some programs at the apprenticeship school can lead to an associate's or bachelor's degree. One benefit of apprenticeship programs is that you can earn a credential at the same time you earn a living wage.

Can you talk more about how your program supports students' financial needs while they're in school? Does it allow you to serve a more diverse class of students, including people who may be older or have a family, who have a kid at home, those kinds of things?

Mr. HOGAN. Thank you for coming back to me as well, because I did want to further clarify that those classes that they take in their normal academics, now the schools is accredited such that they are transferable towards a 2-year degree at the community college level.

They are then able to take that, if it's their choosing, and go to a 4-year institution. And they can often do that on their own time, while they're still working for the company, or we even grant educational leaves of absence for them to go do that.

We do actually have apprentice programs set up on the advanced curriculum side where we have partnered with Old Dominion University and a person can extend their apprenticeship to where when they graduate they would actually have a 4-year degree from Old Dominion University in one of the engineering disciplines.

As well, that education is entirely paid for. They graduate not only with a job, but that degree and zero student debt.

Mr. POLIS. Thank you. And I yield back.

Mr. SMUCKER. Thank you.

The chair would now like to recognize Mr. Allen for 5 minutes of questioning.

Mr. ALLEN. Thank you, Chairman.

And I want to thank the panel for coming in and talking about this important area of job training. And we've got 6.5 million jobs, I understand, that are open in this country for skill, for a skilled workforce, and we're having a hard time getting folks trained up for these positions.

And, Mr. Bennett, I agree with your testimony that President Trump's executive order is an important first step in aligning workforce development with the industry demands. I wholeheartedly support our President's effort. He, like I, wants to get folks back to work in this country. That's why I came here.

It's important that innovative methods the private sector is using to grow our skilled workforce are embraced and encouraged by the government. However, in Section 4 of the executive order, the Secretary of Labor has the ability to exclude an industry from this great new program if that industry has already effective, substantially widespread registered apprenticeship programs.

Can you tell me -- and, of course, my industry was construction -- what it would mean if the construction industry was excluded from this apprenticeship system?

Mr. BENNETT. Yeah. I think if we were excluded, we're going to sell ourselves short as a country. And there's no doubt that apprenticeship model has been successful. But given the volume that we're facing in that skilled workforce shortage and what we're anticipating given the infrastructure bill that could possibly pass, that model, in itself, is not going to get us there.

And as I said earlier in my testimony, the construction industry alone has not been built on registered apprenticeship programs. There has been workforce development going on since the beginning of time, some of which has been registered, some of which has not. But it's industry recognized.

And there are many, many companies in this country -- in fact, in the construction industry 86 percent of it is done open shop. And many of those organizations are providing workforce development opportunities for their teams that's outside of that registered apprenticeship model.

So I think it's very premature for us to eliminate anything at this stage of the game. We should understand, again, what is working, how do we replicate that. And not just within the registered model, because apprenticeship isn't just registered. There's apprenticeships that are nonregistered.

And we're alive and well here today and can demonstrate how successful those programs are and show you where individuals who were making sandwiches have doubled their salaries and are now skilled craft professionals in our organization and can show you multiple examples of that. And we're just one little company based out of Maine. This is happening all across this country.

And I'll just leave you with this quick. My driver this morning was from Ethiopia, moved here in 1996. Today he has his own business with five employees, and he was sharing with me how fortunate he is to be in this country, because up until sixth grade, he did not have shoes.

And his story was just empowering, and so it makes me think, as we're sitting here today, what a wonderful opportunity this country has. We have more work than we have skilled people. We're not wondering how to put bread on the table or put shoes on our feet. We have opportunities to help the American citizens do just that. And that's our job, is to create those opportunities in multiple pathways so that we can provide what he's come all the way from Ethiopia for, to provide for his family. It's just a wonderful opportunity.

Mr. ALLEN. It is. That's why America is a light into a different world.

Mr. Peglow, I'd like to know some of the things you learned from working alongside an experienced technician that you wouldn't have learned if you only had classroom experience and no work component to your curriculum.

Mr. PEGLOW. Some of the things that I've learned from other technicians are kind of what we call tricks of the trade, just different things that aren't in the books that are very career specific or job specific.

Different jobs always have different little tricks. They're still safe tricks, but just quicker ways or things you learn from experience of doing different things. It just depends on what it is, anywhere from motors, to different tricks with welding, machining. They all have their own little tricks to them.

Mr. ALLEN. So you're benefitting from their experience?

Mr. PEGLOW. Yes, sir, very much so.

Mr. ALLEN. And you'll be able to pass that on to the -- you'll be a mentor someday. That's great.

As far as the -- and I'm just about out of time -- but what's important is that we've got to get 20, 25 million people back to work in this country. I thank you for your efforts on behalf of that. And please let me know how I can work with you.

And I yield back.

Mr. SMUCKER. Thank you.

I'd like to now recognize Mr. DeSaulnier for 5 minutes of questioning.

Mr. DESAULNIER. Thank you, Mr. Chairman and the Ranking Member. Thank you for this important hearing.

I want to talk a little bit about the importance of, of course, everything we're talking about, but ultimately in my experience, I represent a part of California, a part of the Bay area that has a heavy concentration of our industrial belt.

I know people don't believe that northern California, the Bay area, has industry, but we've got five refineries in the area that I've represented in local and State and now at the Federal level, and chemical plants, and they work well. But we have very high standards when it comes to apprenticeship standards. We require prevailing wage. It works because it is a high cost area.

So in my experience one of the most difficult things -- and it's not saying I'd be against industry certification -- is making sure we're holding them. And the Federal Government's role in this is not just incentivizing, but making sure -- and, granted, Mr. Peglow, every job has tricks to it, and that's an art form that we should acknowledge -- but in the testing, making sure it's objective and we're getting the higher standards.

Because the employers I talk to, the question isn't that they have jobs, as others said, or that there's not a workforce there, but they're not trained well enough. In a global economy, we can't fool people. We have to hire people to a high standard.

So we should invest in these programs. We should look at programs that the employers are an equal partner in. Most of our programs are partnership with the employees. The employers have been in business for many, many years, doing specific projects in specific industries.

So, Mr. Hogan, maybe you can help me just a little bit. How do we get those independent standards to make sure we verify, and what's the Federal Government's role to assuring that happens? In California we have a State apprenticeship board. Both Republican and Democratic governors have appointed members of that board. And they have very high standards, apprenticeship standards.

And a lot of unaffiliated companies don't like those standards. They're freely able to compete with those standards. But we want to bring everybody up to a level to make sure that it's truly open

competition, because in a global marketplace, if they're not skilled, we're not going to get them employed for very long.

Mr. HOGAN. It's a great question. And I've had that or something similar to it before. And it's also been posed, what advice would you give another company that was trying to start an apprenticeship program and model it somewhat after what we've got? And there's a couple components of that.

One is we always start with having them contact their State or regional apprenticeship representative and get the standards on apprenticeship. And so that becomes a feeder to your registration process, is at least you've got some standards that you're working to that is recognized at the State level.

If time permits, for the organization to benchmark other apprenticeships, because you can always learn something from somebody that has one established.

We participate in, and we encourage them to seek out the American Apprenticeship Roundtable who shares best practices of apprenticeships across the Nation. And then working with their local community college system or technical work centers to fill the gaps on the scholastic portion of it that they may not be able to provide.

Mr. DESAULNIER. And in terms of Federal opportunities for grants and incentives, how important is it to make sure that they are truly objective and based on these standards that are best practices and are objective standards?

Mr. HOGAN. And I think that's part of the challenge that we have, is having those standards and having them linked to some type of funding stream, I think, is important without them becoming overly burdensome, cumbersome, or costly on the organization that's trying to develop them.

Again, only familiar with ours in the Commonwealth of Virginia. As I've stated earlier, we have found that not to be that difficult. They don't require revision unless we make major changes to it.

It's really about providing that organization the details that we have on what are the work processes we're teaching, what are the academic components of that, what are the job rotations, and how do we assess the skills and abilities on a standard basis for all the employees involved in apprenticeship.

Mr. DESAULNIER. Ms. Hughes, I struggle with -- I really believe, since I've come to Congress, that this is a country that's very different. So the magic sauce of getting these standards at a Federal level, but allowing for different States to come up with different approaches. So what works in northern California may or may not work in Kentucky.

However, we have people who travel from your State, I imagine, certainly from Texas and Louisiana, to work at our chemical and petroleum industries. So they have to abide by our standards when they come into California.

So certainly we can have both. We have to have both. You have to have freedom to decide what's best and what's working in Kentucky, but you can learn from other jurisdictions just as California can learn from Kentucky.

So I wonder if you could -- if you have instances of that or any kind of comment?

Ms. HUGHES. I think it's very important that we do learn from each other, and that's the wonderful thing about Kentucky FAME. As companies come together, they share best practices about safety, about recruiting, and those types of things.

And I do agree with you that we do need both in this country. I think all of the people on this panel agree to that, that we've got to get a skilled workforce. And we do want standards. I agree with Mr. Bennett wholeheartedly that we do not want different standards, because all the companies definitely want highly skilled and highly trained individuals.

Mr. DESAULNIER. Thank you. I yield back.

Mr. SMUCKER. Thank you.

I would now like to recognize Mr. Lewis for 5 minutes.

Mr. LEWIS. Thank you, Mr. Chairman. I have here a copy of our local paper, and the headline says: "Shortage of Skilled Workers Squeezing Twin Cities Builders." In fact, there's a quote in here from Robert Heise, president of the Minnesota-North Dakota Chapter of Associated Builders and Contractors, quote: "We have more work than we know what to do with."

So this workforce training issue is front and center not only in the Twin Cities, in my home State of Minnesota, but across this country, as your testimony has shown, and the questions, and the give and take here.

So let me explore this a little bit, Mr. Bennett, and start with you. If, in fact -- or, as I understand, the DOL's Office of Apprenticeship right now, after the regulations under the previous administration, there are 26 specific requirements relating to an apprenticeship program design. There's an apprenticeship-specific equal employment opportunity regulation. There's all sorts of hoops you've got to jump through.

And, yet, an estimated 80 percent of all apprenticeships, or earn-and-learn programs, aren't registered. So what are those folks missing out on that they wouldn't otherwise? I mean, what is the downside? Obviously, you're out from under the regulations. But what are you missing out on, in your view, by not being registered or having these obstacles to a streamlined registration process?

Mr. BENNETT. I don't know that we're missing out on anything. And it might be more we're using the word registered versus recognized. And so those developmental programs that are taking place all across the country with those contractors that you referenced, I think what we're looking for is we're looking for recognition for all that hard work that's being put in place to develop our current workforce and our future workforce.

And it's not that we're looking for it to be regulated, because it's been going on for years. And, like I said, it's been very successful. But at least be recognized so as you're coming into a new State and there are requirements that need to be met, having the ability to say, well, it doesn't have to just be in this model, those same expectations could be met in a different career path or on multiple pathways.

Mr. Lewis. Well, as I understand it, though, you are exempt if you're registered or recognized from some Federal requirements that make it easier to conduct the program. You had mentioned earlier how the flexibility of your industry-led programs, many oth-

ers as well, had developed these pipe welders for their 12-week program.

That sort of flexibility, is that possible under a recognized or registered apprenticeship program, to do what that program did?

Mr. BENNETT. Well, your typical -- if I just took a typical, you know, the outline of a registered apprenticeship program, that's going to require -- I think the minimum is 144 hours, don't quote me on this, and a minimum of 2,000 worker. I think those are the basics and it increases from there.

That can be restrictive, I mean, with an open shop, our open shop philosophy and are merit based. We want to progress those that have the ability to demonstrate the competency at their own pace. If they master a particular skill and can progress, we want them to progress and not be held back by the rest of their classmates.

No different than if somebody needs remedial training. We want the opportunity to provide the remedial training without being handcuffed by the restrictions of a particular program.

Mr. LEWIS. One final quick question, and that is, under the President's executive order it provides that any industry-recognized apprenticeship program should be considered for an expedited or streamlined registration where possible. Except, as we've talked about, it will carve out, or in any sector in which the Department of Labor has registered apprenticeship programs that are already effective or widespread, they might be exempt from this expedited process.

I mean, obviously, that would impair your ability to design some of these programs, correct?

Mr. BENNETT. Yes, it would. Yes.

Mr. LEWIS. All right. Thank you. I yield back.

Mr. SMUCKER. Thank you, Mr. Lewis.

I'd like to now welcome Mr. Norcross to the subcommittee. And hearing no objection, I recognize Mr. Norcross to question the witnesses for 5 minutes.

Mr. NORCROSS. Thank you, chairman. This is something near and dear to my heart. I went to the other 4-year school, an apprenticeship. I'm a graduate of a registered apprentice program in electricity. I'm a journeyman wireman by trade long before I came here. And I have heard quite a bit of information coming here.

The good news is, for the vast majority of it, we're all aligned. But in some cases, I think that there's potential for misinformation that I have heard today. The building trades crafts have over 1,900 training centers around this country. They spend $1.3 billion a year, not government money, private money, and if this was a university, a public university, it would be five times larger than Arizona State University, the third largest university in this system. If it was a K-12, it would be the largest school district.

So, as you understand, we don't have to recreate the wheel here. It works, and it works very well. But there are some issues that come to mind when we start talking about what is successful, what works, and what doesn't. I hear the word "flexible." There's a difference between an apprenticeship program, which is to become a journeyperson and skilled in that craft, versus continuing education, being flexible to adapt to market conditions. I don't think

anybody would suggest to you, in 12 weeks, you will make a well-rounded welder who will build his career without additional training, maybe in very specific crafts, but that doesn't happen.

Remarkably that, in the construction industry, where we just heard the claim that 80 percent of it is open shop, then why is it that the JATC, the union apprentices, provide 75 percent of the apprenticeship programs? It is backwards. If they're doing that much work, then you would think they would do that. I might suggest to you there's another reason, because as an apprentice, you can be paid less than the journeyman's wages.

So I ask to you, Mr. Bennett, what's the graduation rate of the apprenticeship programs with your company? And in the -- your sector?

Mr. BENNETT. In our sector, I would have to get back to you with the specifics for our sector, but I can give you a statistics --

Mr. NORCROSS. Let me share with you what it is in New Jersey. For non-JATC programs, less than 30 percent of their apprentices graduate; with the JATC programs, north of 85 percent. And this is where we see the difference. Involvement from employers and employees makes it a much healthier program understanding what they go through. Look at that cue. That's massive change in a registered program.

There were, let me see here, last year, 1,700 new apprenticeship programs. It doesn't seem that it is that hard because there's 21,000 registered apprentice programs in this country, many from your company. And here it is. Five steps, quick-start toolkit to how to start an apprenticeship program. We're not talking you need a Ph.D. in making an apprenticeship program. This is something that can be and has been done. Tax credits for those with apprenticeships.

So hearing the statements that you come up with don't jive with what's going on in reality. The fact of the matter is there's a shortage now because we came off the worst recession for the construction industry since the Depression. It takes time to build that back up. But, lo and behold, the apprenticeships over the course of the last 6 years up exponentially in this all from our registered apprenticeship program.

So, when we read the executive order, it makes perfect sense. With all the items that are going on in this country, why are you trying to fix a program that works better and has been instituted for over 100 years? I think it should be the benchmark going forward, and certainly, Mr. Bennett, I would like to hear your opinion about those graduation rates and the differences.

Mr. BENNETT. And if I could just respond to that. We're not here to say that the registered apprenticeship program is broken. We're here to share with you that there is another model that is taking place to the tune of we're investing $1.1 billion as well.

Mr. NORCROSS. In nonregistered programs?

Mr. BENNETT. Nonregistered programs across this country.

Mr. NORCROSS. Why wouldn't you register them if they're that easy?

Mr. BENNETT. Excuse me?

Mr. NORCROSS. Why wouldn't you register your program since it is that easy?

Mr. BENNETT. The flexibility that is provided in these industry-recognized programs.

Mr. NORCROSS. But you're in construction, 15 basic crafts. The electrons flow the same way in Maine as they do in New Jersey.

Mr. BENNETT. I completely agree, and that's why we're advocating there should be reciprocity because the electrons do flow the same, but there is not reciprocity amongst all the States with some of these programs. And I was reading a report and on the way down here this morning, the Aspen report, where it says that 50 percent of all registered apprenticeship programs that start within 1 year are eliminated. They don't finish. So it is not that program is broke. We're not here -- not arguing your point. What we want to convey is there is more than one way to develop skilled craft professionals in this country, and that's what we're trying to articulate.

Mr. NORCROSS. So I heard -- and I see I'm out of time. We could spend a lot more time, but thank you for yielding the time. I appreciate it and the testimony that I heard. Thank you.

Mr. SMUCKER. And, with that, I would like to again thank our witnesses for taking the time to testify before the subcommittee today, and I now recognize Ranking Member Davis for any closing remarks that she may be have.

Mrs. DAVIS. Thank you very much, Mr. Chairman, and on your first day in the chair, you have done a good job. Thanks so much.

And to all of you really. You have provided excellent testimony. There have been some differences, and that's great for us to hear, frankly, and to try and move forward and become better educated. We have some folks who actually have experienced this more than others. And I think what we need to do is to continue to ask the questions and figure out the extent to which there is a better case to integrate the programs in some way that is understandable to the public and also to provide even, you know, a national registry, if you will, so that we're able to really understand where we are and, I hope, where we're going to go, because that's really what this is about, is trying to scale up programs that work for the American people and provide those great jobs and wages and make sure that young people know that they can aspire and think about at a pretty early age, hopefully, where they want to go with this. So we're delighted.

I also wanted to put into the record the National Electrical Contractors Association statement, and appreciate all of the attention today. Thank you very much.

Mr. SMUCKER. Without objection.

[The information follows:]

Statement for the Record

Submitted by the

National Electrical Contractors Association

to the

Subcommittee on Education and Workforce Development

Committee on Education and the Workforce

U.S. House of Representatives

for a hearing on

"Expanding Options for Employers and Workers Through Earn-and-Learn Opportunities"

July 25, 2017

NECA is the voice of the $130 billion electrical construction industry that brings power, light, and communication technology to buildings and communities across the U.S. NECA's national office and 119 local chapters advance the industry through advocacy, education, research and standards development.

NATIONAL ELECTICAL CONTRACTORS ASSOCATION
412 First Street, SE Suite 110
Washington, D.C. 20003
Phone: (301) 657-3110
FAX: (301) 215-4500
@NECAGovtAffairs

Statement for the Record
On behalf of the National Electrical Contractors Association (NECA)
Subcommittee on Education and Workforce Development
Committee on Education and the Workforce
July 25, 2017

Over 70 years ago, the National Electrical Contractors Association and the International Brotherhood of Electrical Workers (IBEW) embarked on a joint venture to develop the National Joint Apprenticeship Training Program (NJATC). Today, the newly rechristened *"electrical training Alliance"* invests nearly $300 million in private funds annually in what we believe is the largest and most successful apprenticeship and training program in the nation. Today, there are more than 300 jointly administered local programs that are trust financed and together we have trained over 350,000 apprentices to journeyman status.

Our apprenticeship program is a well-organized and supervised method to train people with little or no prior knowledge of a craft or trade to become capable, qualified craftspersons or journeypersons. It is the original "earn while you learn program." The "on-the-job" portion of the training is a full-time, well-paid job. The goal is to provide the electrical construction industry with the highest level of training and highly skilled workforce possible. To accomplish this goal, apprentices receive the highest level of training in the industry, with a requirement of 8,000 hours of on-the-job training and 900 hours of classroom time over a five-year period. Upon completion of the curriculum and on-the-job training, apprentices receive certificates documenting their successful completion of the program. Incidentally, all electrical apprentices receive incremental raises as they reach certain set milestones. They are not a burden to the taxpayers because the training is fully funded by the industry without any taxpayer assistance. Perhaps the greatest benefit is that in the end they are earning while they are learning. Each year, participants in the program contribute in excess of $600 million dollars in federal, state, and local taxes. Lastly, they also receive retirement plans and medical coverage for themselves and their families that are also provided at no cost to the American taxpayer.

We are quite proud of the opportunities our apprenticeship programs offer around the country. While there is measurable value in a traditional college education, we would be remiss if we did not discuss some possible alternative routes for students who might not think a standard four-year degree is the right path for them or do not wish to take on the burden of graduating with hundreds of thousands of dollars in student loan debt and no guarantee of a job or attaining valuable skills.

The necessity of opportunities offered through apprenticeships is well documented as the competition for work grows greater and greater. Cultivating talent is becoming more and more critical to successful electrical contracting companies. With the increasing sophistication of the construction industry, electrical contracting needs a well-rounded

workforce prepared to improve the delivery of electrical construction projects to enhance company profits.

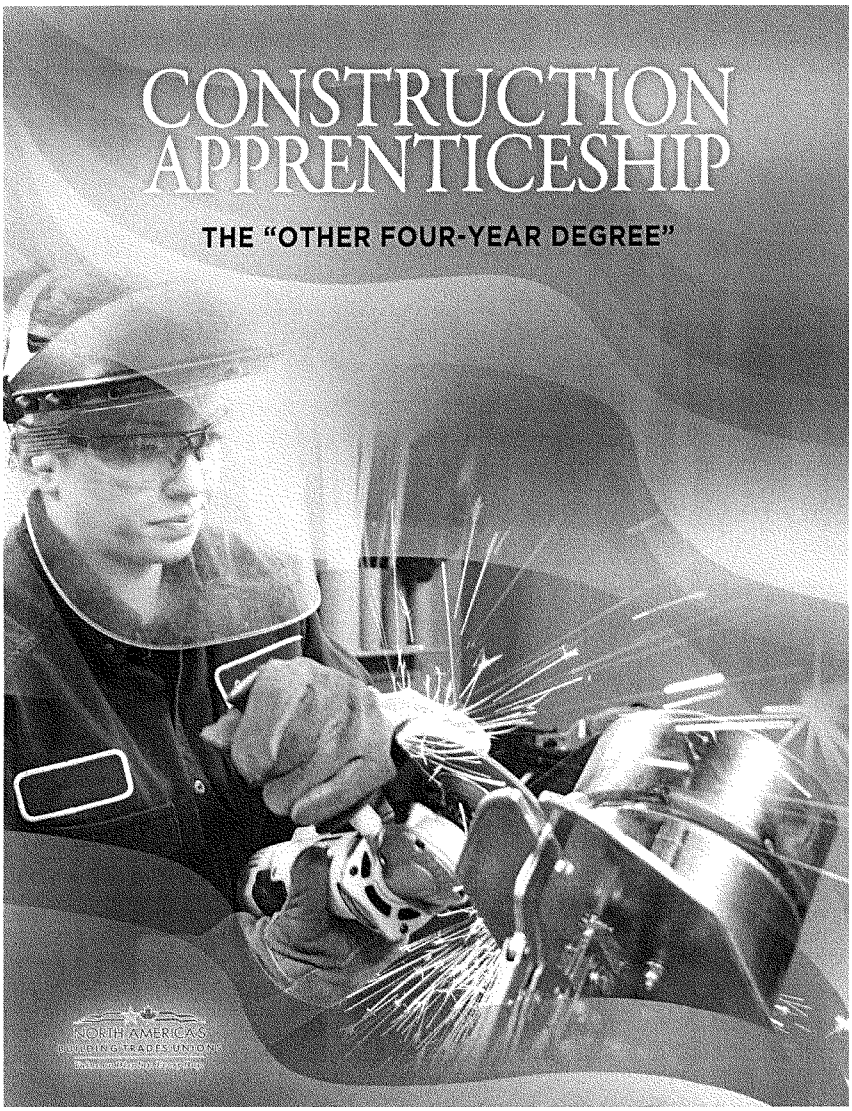
Today, as the millennial generation graduates from high schools, vocational schools, and colleges, they are presented with many career opportunities. Our experience tells us there is high demand for people who are ready to work right out of high school and that there are opportunities for them to obtain the training they need to be set up with a career in the skilled construction trades. After a few years of dedicated training, they will end up with what every one of us would like to have to be a successful adult: a good paying job with health and retirement benefits. We strongly believe the best entitlement program out there should be a job.

Addressing our nation's current and future employment needs is critically important and we believe the existing apprenticeship infrastructure provided by construction trades is a sure-fire bet for success, especially when compared to other earn-and-learn programs.

Mrs. DAVIS. I'm sorry, and the construction -- the other 4-year degree.

Mr. SMUCKER. Without objection.

[The information follows:]


CONSTRUCTION
APPRENTICESHIP
THE "OTHER FOUR-YEAR DEGREE"
NORTH AMERICA'S
BUILDING TRADES UNIONS

*"The apprenticeship infrastructure of North America's Building Trades Unions, which today encompasses over **1,900 training centers** across the United States and Canada, and which is privately funded through collectively bargained contributions that exceed **$1.3 billion per year**, offers young men and women the chance to work and further their education, without the burden of student loans."*

– Sean McGarvey
President of the North America's Building Trades Unions

51%
of apprenticeship programs anticipate an increase in the number of minority apprentices in their programs during the next two years.

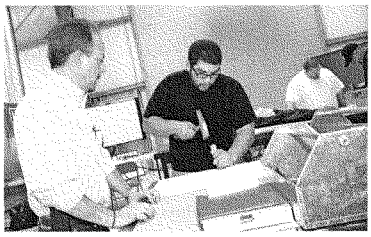
INTRODUCTION

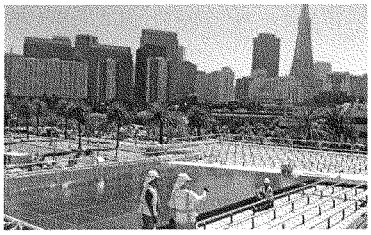
For over 100 years, North America's Building Trades Unions and its signatory contractors have funded and operated a skilled craft apprenticeship system that is the envy of the world.

Apprenticeship and workplace-based training is an "earn while you learn" system that offers young people the chance to learn from the best trained construction workers in North America. When they complete their apprenticeship, they also have a portable, nationally recognized credential that they can take anywhere in the country, one that comes with good pay and benefits that will support them and their families.

An additional important feature is that most apprenticeship programs have been assessed for college credit, which participants can apply toward an associate's or bachelor's degree.

To be sure, apprenticeship is the "other four-year degree."





Apprenticeship programs have also proven to provide a greater return for employers. Economic return on investment (ROI) has shown that employers gain a return for craft training of as much as $3 to every $1 that is invested; accounted for by improved safety, elimination of rework, and increased productivity of the craft worker. Similarly, those completing an apprenticeship earn substantially more over a career than the average two-year college degree graduate.

The joint administration of apprenticeship and training enables contractors and craft organizations to develop and modify training in real time, in order to better fit the needs of the industry at any given time.

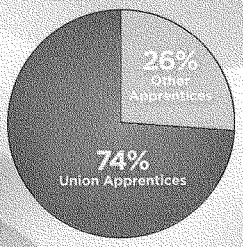
Similarly, training and education curricula are developed in a manner that is career centered, and in keeping with the needs of a lifetime career, rather than narrowly suited to a single employer's immediate needs.

The apprenticeship infrastructure of North America's Building Trades Unions, which today encompasses over 1,900 training centers across the United States and Canada, and which is privately funded through collectively bargained contributions that exceed $1.3 billion per year, offers young men and women the chance to work and further their education, without the burden of student loans.

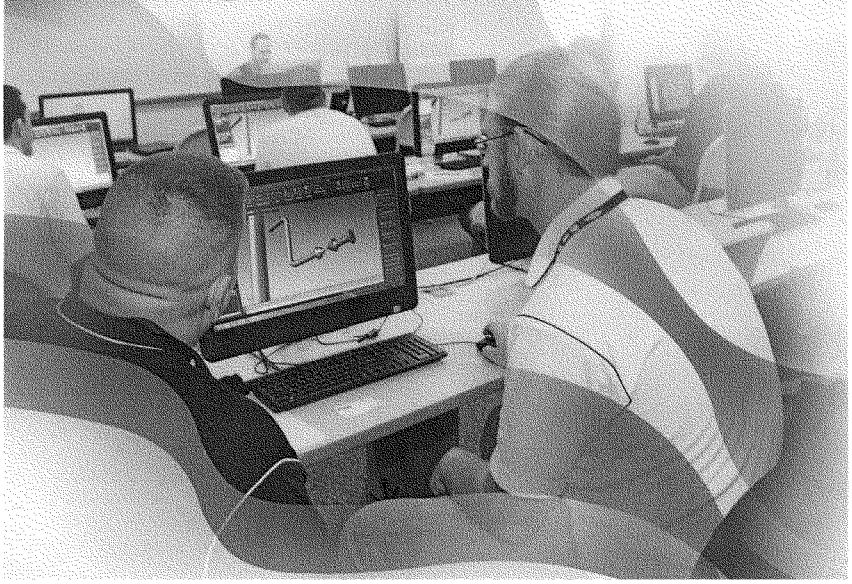
No other sector of the North American construction industry operates such a comprehensive and successful training approach; and no other industry in North America has a comparable system in place.

"CII (the Construction Industry Institute) established the Construction Industry Craft Training Research Team to examine construction craft training. The team concludes that each dollar invested in craft training can yield $1.30 to $3.00 in benefits. The benefits accrue in the form of increased productivity and reductions in turnover, absenteeism, rework, and other areas."

– Construction Industry Craft Training in the United States and Canada," Construction Industry Institute, University of Texas, Research Summary 231-1, August 2000



Percentage of US Construction Apprentices in Union vs Other Programs, 2014



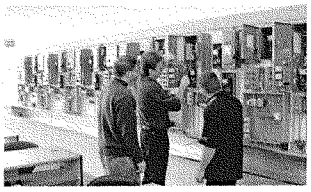
Apprenticeship training is a remarkably successful model when supported broadly by employers, and we feel it should be available to more American construction workers. That is why today our unions are making concerted efforts to work with state and local government, as well as community-based organizations, to open the doors of opportunity through apprenticeship readiness programs that target historically underserved populations - primarily, minorities, women and military veterans. The Building Trades are building such pathways of opportunity with the help of groups like the National Urban League, YouthBuild and Job Corps, in New York City, Los Angeles, Milwaukee, Rochester, Cleveland, Detroit, Minneapolis, Augusta and many, many other urban areas.

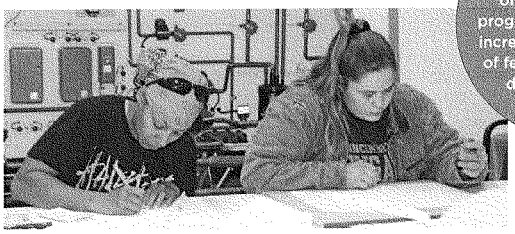
Similarly, our "Helmets to Hardhats" program has become a model for helping military veterans transition back into civilian life with a structured path that will ensure a stable and secure life in the middle class. Since its inception in 2003, the program has helped place over 20,000 veterans in skilled craft apprenticeship programs.

Skilled craft apprenticeship programs offer the necessary capacities, resources and flexibility needed to help low-income, minority and female workers achieve and retain construction careers in the great American middle class, while simultaneously assisting local construction employers obtain the skilled workforce they need to help drive growth in their local labor markets.

This booklet is your invitation to learn more about one of America's greatest educational success stories.

Sean McGarvey
President of the North America's Building Trades Unions





46%
of apprenticeship programs anticipate an increase in the number of female apprentices during next two years.

THE BUILDING TRADES AND REGISTERED APPRENTICESHIP

All Building Trades apprenticeship programs are registered with either the U.S. Department of Labor's Office of Apprenticeship or a State Apprenticeship Agency. These registered apprenticeship programs provide the participants with a high quality, portable, industry sanctioned, nationally recognized credential that certifies occupational proficiency in the construction industry.

OVERALL TRAINING

Overview

- The safest, most highly skilled and productive construction craft workers in the world receive their training through privately-funded, local joint apprenticeship and training committees (JATCs), which offer nationally-recognized, state-of-the-art curricula
- JATC apprenticeship training combines industry standard technical (classroom) instruction with structured on-the-job learning

Training Capacity

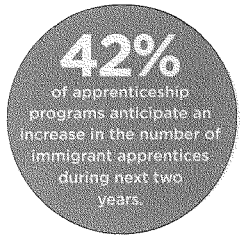
- The Buildings Trades' affiliate unions and their signatory contractors have more than ***1,600 training centers*** in the United States *(Source: North America's Building Trades Unions Research Department Survey)*
- Overall, the 15 Building Trades unions maintain 1,900 training centers throughout North America *(Source: North America's Building Trades Unions Research Department Survey)*
- For an interactive map of the Building Trades training centers, see www.bctd.org
- Nearly two-thirds of all registered apprentices in the US are trained in the construction industry *(Source: Department of Labor, Employment and Training Administration data)*
- Among construction apprentices, 74 percent are trained in the unionized construction sector – known as the joint apprentice training committee (JATC) system *(Source: Department of Labor, Employment and Training Administration data)*
- If the JATC system was a college or university, it would be the second largest college or university in the US – 3 ½ times the size of Kaplan University, more than 4 times larger than Miami Dade Community College and almost 5 times the size of Ohio State *(Source: North America's Building Trades Unions Research Department)*
- If the JATC system was a public university system, it would be the 4th largest US public university system – larger than the University of California and the University of Texas Systems *(Source: North America's Building Trades Unions Research Department)*
- If the JATC system was a K-12 school district, it would be the 6th largest K-12 school in the country – larger than the Broward County, Florida; Houston, Texas; Hawaii or Orange County, Florida school districts *(Source: North America's Building Trades Unions Research Department)*

Training Investment

- The Building Trades and their signatory contractors invest over ***$1.3 billion annually in apprentice and journey-level training.*** This total does not include the tens of millions invested by the JATCs annually in construction training plant and equipment *(Source: North America's Building Trades Unions Research Department Survey)*
- The Building Trades and their signatory contractors annually invest $10 billion in apprentice wages and benefits *(Source: North America's Building Trades Unions Research Department)*

"The construction skills model is one which can be replicated in cities across our nation. By bringing business, labor and government together as strategic partners, it represents what I believe is the best model not just for the construction industry, but for every sector of the economy."

– Lou Colletti; President and CEO, Building Trades Employer Association of New York; January 2015



Source: Top Trends in Jointly Managed [Union] Apprenticeship Programs, 2014, International Foundation of Employee Benefit Plans, - based on survey of 145 training funds, 97% were Building Trades.

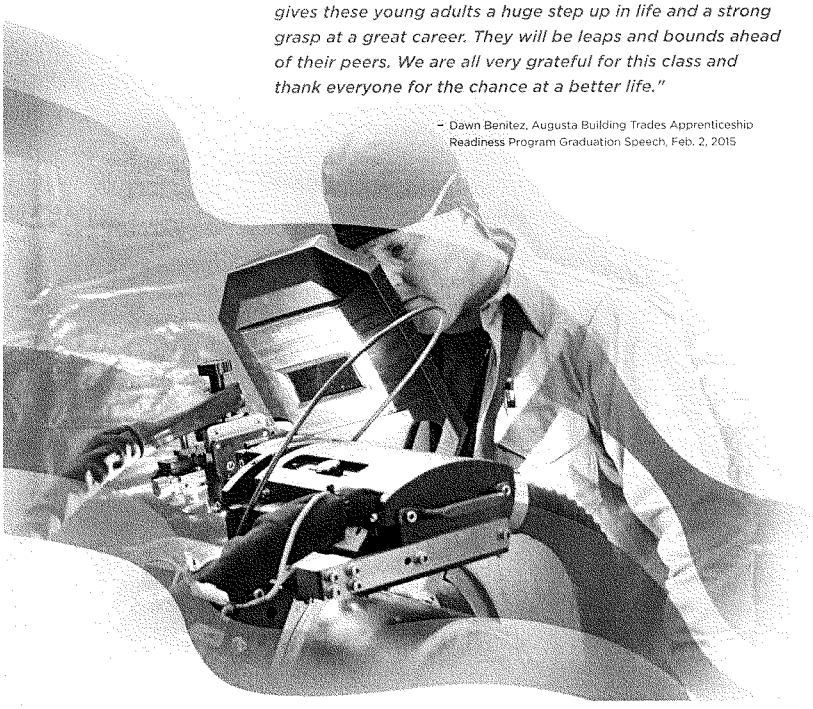
Industry Growth and the Desire for Increased Diversity

- North America's Building Trades Unions have embarked on an effort to increase the number of apprentices used in the US construction industry as it expands and to provide greater opportunities for people in underserved communities – particularly women, minorities and veterans – to acquire good middle class jobs in the construction industry. One way the Building Trades is confronting these challenges is through the use of Project Labor Agreements (PLAs) that contain what are known as community workforce provisions. These "provisions," which simply means straightforward language that specifies the number of local residents that must be hired on a specific project, are an essential component in the process of building construction pathways to the middle class for underserved communities. The second way the Building Trades are trying to achieve greater diversity in construction is through the use of apprenticeship readiness programs. Apprenticeship readiness programs, such as those that use the Building Trades' nationally recognized Multi-Craft Core Curriculum (MC3), provide additional skills training for young people looking for a career in a Building Trades registered apprenticeship program. When done right, these "readiness" programs lead to higher retention rates.
- In New York City, the Edward J. Malloy Initiative for Construction Skills places underserved young people in middle class construction industry careers (average salary – $67,110). From 2001 – October 2013, the Construction Skills program placed 1,443 graduates into union apprenticeship programs. The Construction Skills graduates have an 80 percent retention rate as union apprentices or journey-level workers. Roughly 90 percent of program graduates are African American, Hispanic or Asian. [1]
- By 2020 - 65% of jobs will require post-secondary education and 30% could be filled by apprenticeships *(Georgetown Center on Education and Workforce)*
- By 2020 - Apprenticeable occupations in the US are projected to grow by 22.5% *(BLS)*

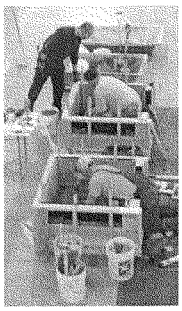
[1] Ester Fuchs, Dorian Warren and Kimberly Bayer, *Expanding Opportunity for Middle Class Jobs in New York City: Minority Youth Employment in the [illegible] and Construction Trades*, Columbia School of International and Public [illegible]

"As a veteran, this class gives me another opportunity to help support my family and start another career in my life. It also gives these young adults a huge step up in life and a strong grasp at a great career. They will be leaps and bounds ahead of their peers. We are all very grateful for this class and thank everyone for the chance at a better life."

– Dawn Benitez, Augusta Building Trades Apprenticeship Readiness Program Graduation Speech, Feb. 2, 2015

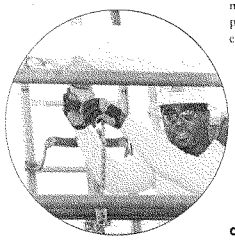


CERTIFICATIONS/SPECIALTY TRAINING - JOURNEYPERSON UPGRADES



"Career readiness is a crucial part of our economic well-being now and into the future"

– Kentucky Governor Steve Beshear (D); February 2015



Building Trades Training = Life Long Learning

North America's Building Trades Unions provide training for tens of thousands of journey-level workers each year through Joint Apprenticeship Training Committee facilities, with the goal of continually improving their skills. Journey-level training includes continuing education in OSHA sanctioned health and safety programs, foreman training, instructor certification and other forms of skill upgrades such as welding or painting certifications. The Building Trades prepare and train workers for the ever-changing needs in specialized industries, such as the Nuclear Mechanics Apprenticeship Process (NMAP), which certifies journey-level workers by teaching them cutting edge skills used across the nuclear industry.

More Life Long Learning: The Building Trades, Apprenticeship and College Credit

One of the great advantages of Building Trades registered apprenticeship programs found within the union construction industry is that if an apprentice wants to head back to college, he or she has a head start. The vast majority of joint labor-management training programs found in the construction industry have been assessed for college credit – so apprentices can apply their training toward an associate's degree, or bachelor's degree. Overall, the Building Trades affiliate unions have "the most extensive and institutionalized partnerships" with community colleges in the US labor movement, which includes articulation agreements with hundreds of US community and technical colleges *(Source: The Aspen Institute, AFL-CIO's UA Apprenticeship Program, http://www.aspeninstitute.org/policy-work/economic-opportunities/skills-america-future/models-success/afl-cio, accessed 12/17/13; NABTU Research Department Survey.*

Construction Management – Rowan University

The Building Trades are working with Rowan University, a comprehensive, public research university in southern New Jersey, to develop a degree completion program in construction management. This program, which would be geared for Building Trades members with some years of experience in the construction industry, would be fully online and accessible from anywhere in North America.

College Credit for Apprenticeship Training: Building Trades and the RACC

North America's Building Trades Unions supports – and has joined – the Registered Apprenticeship-College Consortium (RACC). The RACC is a network of colleges and Registered Apprenticeship programs that work together to provide enhanced educational opportunities to a significant number of apprentices across the country. Through the consortium, colleges agree to provide credit for a Registered Apprenticeship completion certificate towards an Associate's or Bachelor's degree as recommended by a recognized third party evaluator. Thus the consortium will create a national network to help expand opportunities for apprentices to complete their postsecondary degrees at member colleges. The RACC is a joint initiative by the U.S. Department of Labor and the U.S. Department of Education.

The Business Case for Apprenticeship Training

Apprenticeship programs are also a tremendous value for employers. The average employer realizes returns as much as $3 for every $1 that is invested in craft training. Those gains arise because craft laborers are more productive, work more safely, and deliver quality craftsmanship that is done right the first time. And when employers partner with craft labor organizations to administer apprenticeship programs, both parties win. Contractors can modify their training programs on the fly to meet the exact needs of the project or a given market. Apprentices, meanwhile, develop skills that are high in demand – and can lead not just to immediate employment, but a secure, middle class career.

NORTH AMERICA'S BUILDING TRADES UNIONS: APPRENTICESHIP READINESS PROGRAMS

Our Goal

Across the US, North America's Building Trades Unions are working with policy makers and Community Based Organizations (CBOs) to set up apprenticeship readiness programs. These programs are designed to provide opportunities for candidates from diverse backgrounds to enter Building Trades apprenticeship or Step Up programs. The Building Trades are working with contractors, apprenticeship training directors, business managers, CBO representatives and Building Trades staff to ensure that each of these programs produce the highest quality candidates for Building Trades apprenticeships.

The Need

There is a need today for high quality workforce development programs that provide local residents, many from underserved populations, with the experience, education and skills required to apply to become construction apprentices. These programs satisfy local hire requirements in cities across the US, which have been given increased visibility and emphasis in recent years. They also address the need for greater diversity in the construction industry workforce. Importantly, the Building Trades' apprenticeship readiness programs demonstrates to local and regional elected officials that the Building Trades are committed to diversifying the union workforce in construction and to providing pathways to middle class jobs for underrepresented workers.

The Process

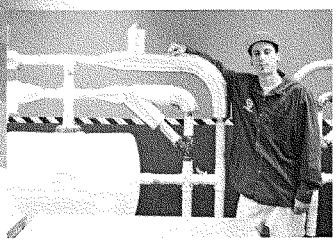
CBOs play an essential role in this process by recruiting, supporting and referring candidates who have the potential for success in Building Trades apprenticeship readiness programs. The first step in recruiting is the vetting of candidates. Qualified candidates for apprenticeship must have a GED and a Driver's License, and they must pass a drug test. CBOs may also provide "wrap around" support services for qualified candidates, such as instruction in with English literacy, provisions for transportation to and from the training, and access to day care. With these services, candidates will have a better chance of succeeding in and completing apprenticeship programs.

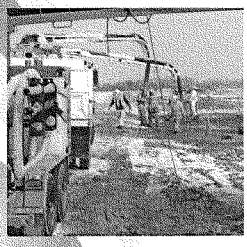
Getting In

Apprenticeship readiness program candidates are typically reviewed by a Referral Committee made up of apprenticeship training directors, contractors (or representatives from contractor associations), and representatives from Building Trades state or local Councils and participating Community Based Organizations. These Committees develop criteria for acceptance into the apprenticeship readiness programs, and these criteria may change over time based on the needs or requirements for individual programs. The role of the Committees is to ensure that the very best candidates are referred. Upon graduation, the Referral Committee may also make recommendations to the Building Trades apprenticeship programs.

"We've seen the good work of apprenticeship programs here in Iowa thanks to the leadership of groups like the Central Iowa Building and Construction Trades Council. In fact, that's a big reason why we tripled funding for apprenticeship programs."

– Iowa Governor Terry Branstad (R) May 2014





Curriculum

The Building Trades uses its own Multi-Craft Core Curriculum (MC3) in these apprentice readiness programs. The MC3 is a comprehensive training program (120 hours) that was developed and approved by the Building Trades National Apprenticeship and Training Committee and recognized as an innovation in the field by the US Department of Labor. The MC3 prepares interested young people and adults to enter and succeed in exciting and challenging apprenticeship programs. The MC3 is only offered in cooperation with state and local Building Trades Councils.

Standards

All Building Trades' Apprenticeship Readiness Programs conform to the definitions and quality framework established by the DOL Employment and Training Administration's Training and Employment Notice Number 13-12, which the Department released November 30, 2012. According to the ETA "TEN," "a quality pre-apprenticeship program is one that incorporates the following elements:"

- Approved training and curriculum,
- Strategies for long-term success,
- Access to appropriate support services,
- Promotes greater use of registered apprenticeship,
- Meaningful hands on training that does not displace paid employees,
- Facilitated entry/or articulation.

All of these elements are part of the design of all Building Trades' ARPs.

Examples of Pre-Apprenticeship Programs

The Edward J. Malloy Initiative for Construction Skills-New York City, NY http://www.constructionskills.org/ index.html

Building Pathways Building Trades Pre-Apprenticeship Program (Building Pathways)---Boston, MA http://tcimass.org/apprenticeship- programs-2

Wisconsin Regional Trades Partnership/ Big Step-Milwaukee, WI http://wrtp.org/

Access for All-Detroit, MI

Augusta Building Trades Apprenticeship Readiness program-Augusta, GA

National Partners

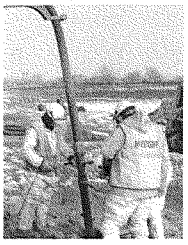
National Urban League
YouthBuild USA
Wider Opportunities for Women (WOW)
Helmets to Hardhats (H2H)
North America's Building Trades Unions National Standing Committee on Apprenticeship and Training
National Standing Committee on Women in the Trades
Build TogetHER - Women in the Building Trades (Canada)

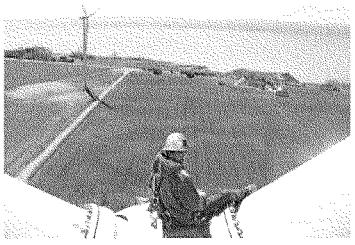
NORTH AMERICA'S BUILDING TRADES UNIONS
Value on Display, Every Day.

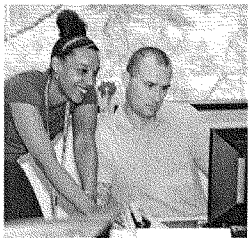
www.bctd.org
www.facebook.com/NorthAmericasBuildingTradesUnions

HELMETS TO HARDHATS

www.facebook.com/pages/Helmets-to-Hardhats/98321937334







NORTH AMERICA'S BUILDING TRADES UNIONS

International Association of Heat and Frost Insulators and Allied Workers

Members of this union apply insulation to pipes, tanks, boilers, ducts, refrigeration equipment and other surfaces requiring thermal control of temperatures. The responsibilities of these mechanics, improvers and apprentices also include the manufacture, fabrication, assembling, molding, erection, spraying, pouring, mixing, hanging, preparation, application, adjusting, alteration, repairing, dismantling, reconditioning, corrosive control, testing and maintenance of heat or frost insulation. Workers also handle insulation materials made of fiberglass, rubber, calcium silicate and urethane. Insulators also do removal of asbestos containing material.
www.insulators.org

International Union of Painters and Allied Trades

IUPAT members work in one or more of several crafts: painting, wallpaper hanging, glazing (glass work), drywall and taping, floor covering, and sign and display work. Painters and paperhangers work in industrial, commercial and residential settings, from bridges and ships to interior walls of office buildings and homes. Drywall finishers tape, fill in and smooth seams in sheets of drywall. Glaziers prepare and install various kinds of glass, mirrors, metal framing and doors/entrances to buildings. Floor coverers work with resilient floors, as well as carpet and decorative coverings. Exterior sign and display work, like billboards, is another choice. Other types of work are convention display and show decorators.
www.iupat.org

International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers

The Boilermakers are a diverse union of workers in construction, maintenance, manufacturing, professional emergency medical services, repair and related industries. Boilermakers build and repair ships, fishing boats, ferries, barges, cranes, boilers, tanks, pressure vessels, plate and structural fabrications among other things. These skilled workers often use acetylene torches, power grinders and other equipment for welding, burning, cutting, rigging, layout and bolting. It's hard work, and heavy lifting and dedication to the craft is required.
www.boilermakers.org

United Union of Roofers, Waterproofers and Allied Workers

Members of the Roofers union install new roofs and remove old roofs using a variety of materials. Roofers install hot built-up and single-ply roofing systems on mostly commercial/ industrial structures. Waterproofers install moisture-resistant products on below-grade structures and other surfaces to prevent water intrusion into buildings. The work is performed in all weather conditions. Members also operate a variety of mechanical and electrical equipment associated with the installation of roofing and waterproofing products.
www.unionroofers.com

International Association of Sheet Metal, Air, Rail and Transportation Workers

SMART members work in several industries. Sheet metal workers fabricate, install and service heating, venting, and air conditioning (HVAC) systems; blowpipe and industrial systems; metal roofing; coping and flashing; and stainless steel work for restaurants, kitchens and hospitals. They prepare shop and field drawings manually and with computer programs. Members also provide HVAC and refrigeration service.
www.smart-union.org

International Union of Bricklayers and Allied Craftworkers

BAC represents all skilled trowel trades workers, including bricklayers, tile setters, plasterers, cement masons, marble masons, restoration workers, stonemasons, helpers or finishers, terrazzo and mosaic workers. Their work includes buildings, homes, stadiums, monuments and landmarks throughout the United States and Canada.
www.bacweb.org

International Brotherhood of Electrical Workers

The IBEW represents workers in the electrical industry including construction, gas and electric utilities, telecommunications, railroads and government agencies. Construction and residential electricians work in all phases of the electrical construction and service industry. Their worksites range from single-family residences to state-of-the-art industrial plants. Inside wire workers may install and maintain conduits, switches and converters, as well as wire lighting, to complex systems incorporating computerization and high technology. Electricians work in the electric sign industry and increasingly perform more work in the installation of fiber optics and voice/data/video equipment.
www.ibew.org

United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada

UA is a multi-craft union that represents plumbers and pipe, sprinkler, and refrigerator fitters, as well as service technicians. All of these jobs require the installation, remodeling or maintenance of systems that carry water, steam, air and other liquids or gases necessary for sanitation, industrial production, heating and air conditioning, and many other uses. Workers measure, cut, and bend pipe, as well as weld, braze, caulk, solder, glue or thread joints at residential and commercial job sites.
www.ua.org

NORTH AMERICA'S BUILDING TRADES UNIONS

International Union of Operating Engineers

IUOE members are operating and stationary engineers, as well as significant numbers of public employees engaged in a wide variety of occupations. Stationary engineers work in operations and maintenance in building and industrial complexes, and in the service industries. Operating engineers operate heavy construction equipment such as cranes, bulldozers, pavers, trench excavators and many other kinds of equipment used in constructing buildings, dams, airports and highways. Operating engineers also work in the sand and gravel, cement and asphalt industries; in the shipyards; on water dredges, oil refineries and oil pipelines; in sewer and water construction; in ports of major cities and many other industries. Most work is done outdoors and depends on the weather.

Operating Engineers' work includes, for example: cranes, bulldozers, pavers and trench excavators.
www.iuoe.org

United Brotherhood of Carpenters and Joiners of America

Members of the UBC are commercial and residential carpenters, floor layers, millwrights, pile drivers, interior systems carpenters, lathers, cabinetmakers and trade show carpenters. They build forms for concrete and frame buildings, walls, footings, columns and stairs. Carpenters also install doors, windows, storefronts and hand rails, and build cabinets, counter tops and finished stair handrails. Carpenters must read blueprints, measure accurately and calculate dimensions.

Carpenter crafts include: Carpenters and Joiners, Millwrights, Pile Drivers, Residential Carpenters, Interior Systems Carpenters, Lathers and Drywallers, Cabinet Makers and Millworkers and Floor Layers.
www.carpenters.org

International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers

Members of the Iron Workers assemble and erect steel framework and other metal parts in buildings and on bridges, dams, skyscrapers, factories and other steel structures. They raise, place and join steel girders and columns to form structural frameworks, including the welding for metal decking. In addition iron workers are responsible for the steel reinforcing of concrete construction. Iron workers fabricate and install ornamental, architectural and miscellaneous metal building components. They install as well curtain wall under the umbrella of the Ornamental and Architectural Department.
www.ironworkers.org

Laborers' International Union of North America

LIUNA represents members working in construction, environmental remediation, maintenance, food service, health care, clerical and other occupations, as well as in state, local and municipal government jobs and as mail handlers in the U.S. Postal Service. LIUNA members have helped lay down new highways, build spectacular bridges, dig tunnels and subways, build new plants, factories, dams and power plants, and erect new schools, churches, hospitals and houses. In building construction and housing, Laborers' work includes excavation, footing and foundations, carpenter tending, compaction, concrete placement, power and hand tools, general clean-up and mason tending for bricklayers. Environmental laborers do asbestos removal, hazardous waste and radiation clean-up. The work performed by Laborers is very physical and it includes digging, carrying, pulling and bending—usually outside in all kinds of weather for long hours at a time.

Laborers' work includes, for example: excavation, footing and foundations, carpenter tending, compaction, concrete placement, power and hand tools, general clean up and mason tending for bricklayers.
www.liuna.org

International Brotherhood of Teamsters

The Teamsters union has several divisions, including a Building Material and Construction Trades Division. Members in this division are truck drivers who transport and haul material, merchandise, equipment or personnel between various locations–including construction sites, manufacturing plants, freight depots, warehouses, and wholesale and retail facilities. They may also load and unload, make mechanical repairs and keep trucks in good working order.

Building material and construction Teamsters are employed in the following types of work: rigging, demolition work, landscaping, pipeline construction work, warehousing and building supply manufacturing.
www.teamster.org

Operative Plasterers' and Cement Masons' International Association of the United States and Canada

OPCMIA members represent skilled plasterers, cement masons, shophands and associated members. Plasterers finish interior walls and ceilings of buildings, apply plaster on masonry, metal, wirelath or gypsum. Bridges, canals, dams, reservoirs, roads and many other engineering feats would be impossible without the skills of OPCMIA cement masons. Cement masons are responsible for all concrete construction, including pouring and finishing of slabs, steps, wall tops, curbs and gutters, sidewalks, paving and other concrete construction.
www.opcmia.org

International Union of Elevator Constructors

The IUEC represent the most qualified and trained elevator constructors in the world. Members assemble, install and replace elevators, escalators, dumbwaiters, moving walkways and similar equipment in new and old buildings. Elevator constructors also maintain and repair this equipment once it is in service, as well as modernize older equipment.
www.iuec.org

Mr. SMUCKER. Again, I would just like to thank the chair of this committee for scheduling this hearing on this really important topic. It was fascinating, and I know the ranking member earlier mentioned some of the other industries outside of what we traditionally think of for apprenticeships, that -- other businesses that are establishing apprenticeship programs. I know I just recently spoke to Zurich Insurance, which is a Swiss company who has established an apprenticeship program. So this model can really be extended well beyond what we think of in traditional apprenticeship programs. And, in fact, Switzerland, Germany, and many European countries are doing just that. So we don't have to build a model from scratch here. We can look for best practices in other countries and other organizations.

And so we have talked about the need for business, that, in my area, it is a crisis. Businesses cannot fill jobs, and you know, I think our businesses in America are the best in the world at adapting to that changing business environment, and no one knows better than they in what skills and abilities the employees need in order to succeed. And I think today we heard some really great examples of programs that are working and programs where businesses are helping to lead the way to develop excellent education and workforce development programs that are really providing workers with the skills that are needed for these high-demand jobs.

So I'm very pleased with the discussion that we have had today. I know the chair looks forward to working with all members of the committee. This really is not a partisan issue, and so I think this subcommittee and the committee looking forward to solutions that we can come up with and work with the administration to advance this.

So thank you so much.

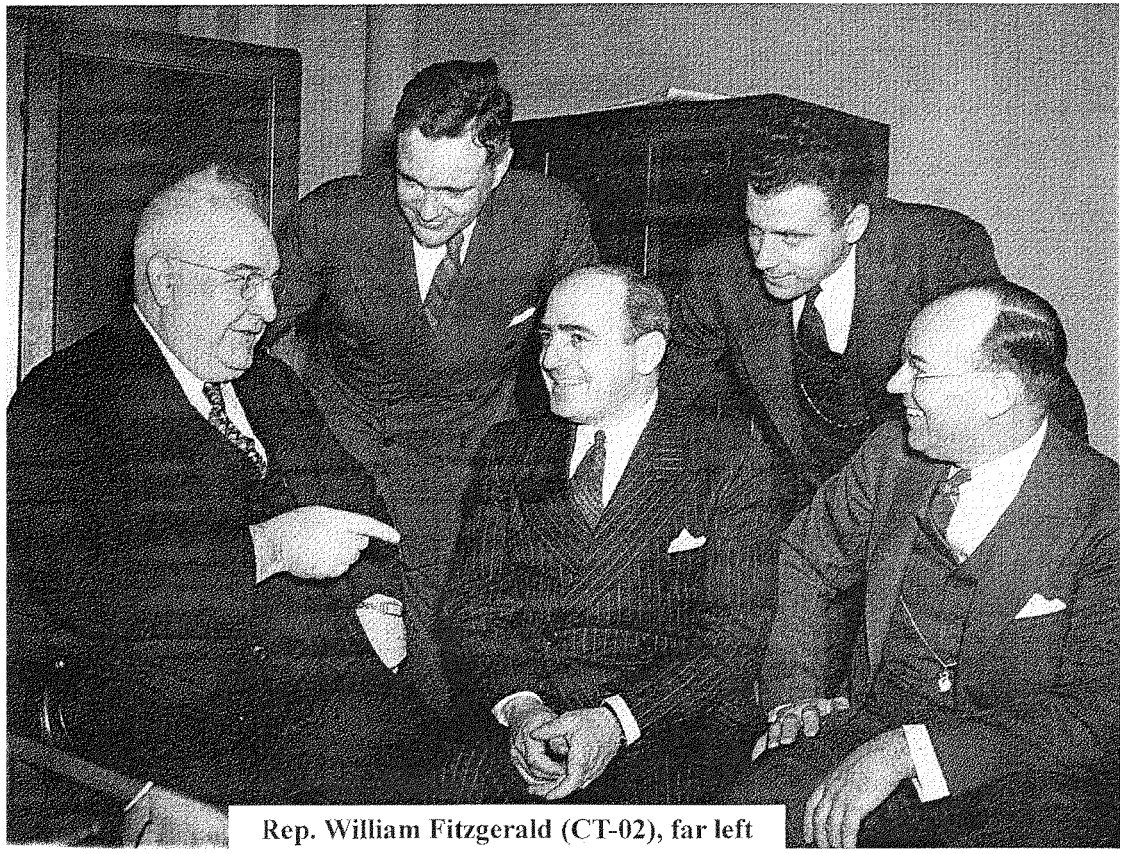
Without objection, there being no further business, the subcommittee now stands adjourned.

[Additional submissions by Mr. Courtney follow:]

USA Factory CEOs to Trump: Jobs Exist; Skills Don't

Department of Labor - Employment and Training Administration

	FY 2017 Enacted	L-HHS FY2018 Bill	L-HHS Bill vs. Enacted
Apprenticeship Programs	$95,000,000	$0	-$95,000,000
WIOA Youth Formula Grants	$873,416,000	$831,842,000	-$41,574,000
WIOA Training and Employment Services (TOTAL)	$3,338,699,000	$3,042,720,000	-$295,979,000



Rep. William Fitzgerald (CT-02), far left

KYFAME

The Kentucky Federation for Advanced Manufacturing Education (KY FAME) is a partnership of regional manufacturers whose purpose is to implement dual-track, apprenticeship-style training that will create a pipeline of highly skilled workers. The primary method to achieve this goal is through partnerships with local educational institutions to offer the Advanced Manufacturing Technician Program (AMT).

WHAT IS THE AMT PROGRAM?

AMT is a dual-track, five-semester program that matches education with continuous real-world working experience through a leading manufacturer. The AMT program combines proven workplace components of apprenticeship with the earn-and-learn model in subjects including electricity, fluid power, mechanics, fabrication and robotics. The result is paid work experience that includes hands-on application and the best practices of a world-class manufacturer. Students who complete this program receive the AMT certification as well as an Associate Degree in Applied Science.

PATHWAY OPTIONS

There is no doubt that students who participate in the KY FAME program have made a decision that will give them multiple career options. The Advanced Manufacturing Technician (AMT) degree is only the beginning. Upon completion of this associate degree, students have a variety of diverse options. Those who are ready to continue developing their craft can continue full-time employment. Others who wish to continue on with their education can seamlessly transition into a degreed program in business or engineering.

THE KY FAME DIFFERENCE

Students sponsored through KY FAME are not only receiving training for a future job, they also are obtaining a high-level technical education and practical job experience. KY FAME provides students with 18 months of relevant, paid job experience that matches the learning environment. As a result, KY FAME students are better prepared for their future career.

		Tu	W		
8-10 Hrs.		SCHOOL	SCHOOL		
2-4 Hrs.	HOMEWORK & STUDY				

Additionally, KY FAME develops programs that focus on the entire person. Traditional educational programs emphasize theory. KY FAME sponsored programs develop the needed technical skills and job experience as well as personal behaviors and core manufacturing skills. The end result is that KY FAME graduates are ready to hit the ground running in a manufacturing career or in furthering their education.

Technical Skills

Electricity
Fluid Power
Motor Controls
Maintaining Industrial Equipment
PLCs
Welding
Machining
Drawings
System Trouble Shooting
Robotics

Personal Behaviors

Attendence
Communication
Diligence
Interpersonal Relations & Initiative
Teamwork

Manufacturing Core Exercises

Safety Culture
Workplace Organization
Lean Manufacturing
Machinery Maintenance & Reliability
Problem Solving

KY FAME GIVES OPTIONS
FOR YOUR FUTURE.

AMT ASSOCIATE DEGREE
ZERO DEBT
WORK EXPERIENCE
65 TO CREDIT HOURS

CAREER

KY FAME graduates are in a great position to leverage career options. With over 1,800 hours already accumulated in on-the-job training and work experience, and the AMT associate degree in hand, one option for graduates is to continue working full time with their sponsoring employer. These are employers with whom the students have built strong relationships and who students know are truly invested in them. Many of the graduates who continue down this path will move into advanced programs and are put on the fast track for advancement and potential leadership positions.

BUSINESS

After receiving their associate degree, many students choose to further their education and pursue a bachelor's degree, either right away, or after having worked a few years. Through the partnership with KY FAME and Northwood University, one path to achieve this goal is the Manufacturing Management Bachelor of Business Administration degree. The credits earned in AMT are all transferable toward a degree, and courses can be completed online or on-site at Northwood's Kentucky locations. This program enhances the skills already learned and gives the student a new perspective on business, manufacturing management, floor level production and technical skills.

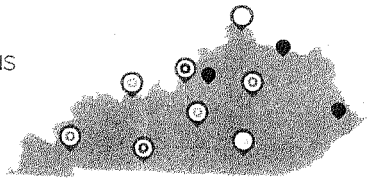
ENGINEERING

Another exciting option that graduates have is to work toward a degree in engineering with the University of Kentucky. Students who graduate from the KY FAME program before entering into UK's engineering program have a definite advantage. They have a much broader base of knowledge through their training as a multi-skilled technician. Students have a strong command of working with their hands and working in the real world; skills that may not have been developed had the student entered the engineering program right out of high school. The combination of the two programs is what creates potentially the most sought out and well qualified new engineers in the job field.

[Additional submission by Mr. Peglow follows:]

KYFAME
CHAPTER LOCATIONS

● Chapters under consideration



BLUEGRASS CHAPTER //

3M • Catalent • CMWA • Commonwealth Tool & Machine • Dana Corporation • Denyo Manufacturing Corporation • E.D. Bullard • Florida Tile • GR Spring & Stamping • Hayashi Telempu • Heartland Automotive • Hitachi • Hobart Corporation • Intelligrated • Lectrodryer • Link Belt • Lincoln Manufacturing • Montaplast • SealingLite • Tarter Farm & Ranch Equipment • Topy • Toyota • Trane • TransNav, Inc • Wausau Paper • Webasto

CUMBERLANDS CHAPTER // CONTACT: DONNIE SLAGLE - dslagle@ttha.com

American Woodmark • Aisin Automotive Casting • Belden, Inc • Highlands Diversified • Superior Battery • Toyotetsu America • UGN, Inc

GREATER LOUISVILLE CHAPTER // CONTACT: TOM HUDSON - tom.hudson@nthworks.com

Atlas Machine & Supply • Caldwell Tanks • Clariant Corporation • Ford Motor Company • GE Appliances • nth|works • Paradise Tomato Kitchen • Universal Woods • Westport Axle Corporation • Zoeller Company

GREATER OWENSBORO CHAPTER //

Big Rivers Electric • Castlen Steel • Domtar Paper • Kimberly-Clark • Metalsa • OMCO Plastics, Inc. • Specialty Food Products • Sun Windows • Toyotetsu Mid-America • Trifecta • Unifirst

LINCOLN TRAIL CHAPTER //

AGC Automotive- Akebono Brake • Alltech • Altec Industries • Barton Brands • Enprotech • Flowers Food • Fischbach • Flex Films • INOAC • Metalsa • Mid-Park • Mitsuba • MTD Products • Mouser Custom Cabinetry • Murakami • Orbis • Plastilon • TB America • Toyoda Gosei • Tower International • Wilbeart Plastics

NORTHERN KY CHAPTER //

Diversified Composits • Grief • Hahn Automation • Krauss-Maffei • Linamar • Linkology USA • L'Oreal • Mubea • Nucor • Robert Bosch Automotive Steering LLC • Safran/Messier-Bugatti-Dowty • Skilcraft • Siemert US • Steinkamp Molding • Stober • Wagstaff • Zotefoams

SOUTHCENTRAL CHAPTER // CONTACT: GREGORY HEAD - greg.head@davert.org

Bilstein Cold Rolled Steel • Bowling Green Metalforming • Champion Pet Foods • Davert North America • Delta Faucet • Franklin Precision Industries • J. M. Smucker Co. • Kobe Aluminum Automotive Products • Logan Aluminum • Manitor Inc. • Quad Graphics • Real Alloy • Sumitomo Electrical Wiring • SUN Products Systems

WEST KY CHAPTER //

ACE Compressor, Inc. • Air Relief • Baptist Health Madisonville • Briggs & Stratton • Centrifugal Technologies • GE Aviation • Hibbs Electromechanical • Integrand Metal Solutions • International Automotive Components • MRCOOL, Inc. • MVP Group • Progress Rail • LRAD North America • Vanderbilt Chemical • Wacker Chemical

SKILLS NETWORK

KY FAME is part of the Kentucky Skills Network, a comprehensive workforce development system that helps companies find, prepare and train their employees.

For general information contact Josh Benton at the Kentucky Cabinet for Economic Development
Joshua.Benton@ky.gov • 502.564.7140

KYFAME

KENTUCKY FEDERATION FOR ADVANCED MANUFACTURING EDUCATION

KYFAME.COM

[Questions submitted for the record and their responses follow:]

September 11, 2017

Mr. Mike Bennett
Vice President
Cianbro
101 Cianbro Square
Pittsfield, ME 04967

Dear Mr. Bennett:

Thank you, again, for testifying before the Subcommittee on Higher Education and Workforce Development at the hearing entitled "Expanding Options for Employers and Workers Through Earn-and-Learn Opportunities" on Wednesday, July 26, 2017.

As a follow-up to your testimony, please find enclosed a question for the record from Rep. Lou Barletta for inclusion in the final hearing record. Please provide your written responses to Education Legislative Assistant Caitlin Burke **no later than October 2, 2017**. Her number is (202) 225-6558 should you have any questions about this request.

We appreciate your time and insight, and we remain grateful for your contribution to the Committee's work.

Sincerely,

Brett Guthrie
Chairman
Subcommittee on Higher Education
and Workforce Development

Rep. Lou Barletta (R-PA)

Mr. Bennett, can you discuss some innovative approaches to apprenticeship programs you've seen throughout your career, and explain how industry can continue to work with schools to encourage participation in them? Are there barriers that make it harder for the two to work together, and, if so, what can Congress do to remove them?

[Mr. Bennett's response to questions submitted for the record follow:]

CIANBRO

Cianbro Corporation

October 2, 2017

Dear Congressman Barletta,

I wanted to follow up on your question: "Can you discuss some innovative approaches to apprenticeship programs you've seen throughout your career, and explain how industry can continue to work with schools to encourage participation in them? Are there barriers that make it harder for the two to work together, and, if so, what can Congress do to remove them?"

I have been fortunate to work for Cianbro, an employee-owned company, for 21 years. During my time there, I have witnessed drastic changes in the way that the industry develops skilled professionals. Construction has been an industry fueled by innovation, market disruption and new technology since the first structure was ever built. Cianbro has been a leader in these developments.

Today, the company's commitment to developing a safe, highly skilled construction workforce is greater than ever, as we recently opened the Cianbro Institute, a state-of-the-art workforce development facility that combines classroom, hands-on labs and simulated work environments as well as a wellness center. Our Cianbro Institute provides more than 75 different educational classes and professional programs that include skilled trades, safety, supervisor and leadership as well as annual compliance updating.

Our vision is to attract, develop and retain the best workforce within the construction industry. Our mission is to be the best at delivering safe, cost effective and efficient workforce development programs in a simulated work environment through partnerships with educational institutions, employment organizations, industry and business, and government agencies.

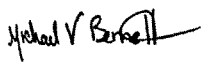
Our partnerships include universities, community colleges, career and technical centers, the Department of Labor, Departments of Economic and Community Development, the Department of Education and our local Workforce Investment Boards (WIBs). The updated career development regulations under the Workforce Innovation and Opportunity Act (WIOA) have helped encourage employer engagement in the workforce educational methods being delivered by the government, and Cianbro sees that engagement as necessary to ensure workers are receiving the most up to date and in demand skills.

Congress can help spur economic development and remove barrier between the public and private sectors by passing the *Strengthening Career and Technical Education for the 21st Century Act*, introduced by Reps. Glenn "GT" Thompson (R-PA) and Raja Krishnamoorthi (D-IL). This legislation would help to ensure students receive the best development opportunities in highly demanded skills so that they can provide value to themselves and their companies. It would also help to reduce some of the administrative

101 CIANBRO SQUARE | PO BOX 1000, PITTSFIELD, ME 04967 | (207) 487-3311 | (207) 679-2465 (FAX) | www.cianbro.com

burdens that prevent many companies from participating in their local educational centers. The legislation passed the House unanimously, but to my knowledge, has yet to be considered in the Senate.

Very truly yours,



Michael W. Bennett

Vice President

The Cianbro Companies

[Mrs. Davis's response to questions submitted for the record follow:]

The Honorable Susan Davis
Committee on Education and the Workforce
Subcommittee on Higher Education and Workforce Development
"Expanding Options for Employers and Workers Through Earn-and-Learn Opportunities"
July 26, 2017

Question for the Record:

Are all the training programs at the Apprentice School are registered through the Commonwealth of Virginia?

Response:

All of the programs of The Apprentice School are currently registered with the Virginia Department of Labor and Industry (DOLI). A new Supply Chain Management program has been submitted and is currently going through the registration process.

Question for the Record:

What does the registration process look like? Does this process strengthen the value of the credential?

An employer interested in becoming a sponsor must contact the local DOLI representative in their area and submit a written notice of registration. Training plans for programs must meet the minimum standards set forth by DOLI for occupational training and related academic instruction for the trade/program being registered. These standards are developed and governed by the Virginia Apprenticeship Council and are in accordance with the Virginia Administrative Code Title 16, Agency 20, Chapter 21. We believe this process adds value to the apprenticeship.

Question for the Record:

Why is it important to the shipyard that the programs at the Apprentice School are "registered" apprenticeship programs?

Registered apprenticeships ensure that occupational training and related academic instruction meet the business needs of employers by producing individuals competent in the work processes and skills associated with a particular trade or vocation. Additionally, having programs registered

through DOLI helps market the school and attract individuals looking for high quality apprenticeships.

Question for the Record:

Do you agree that having a registered apprenticeship is a good thing nationally?

Yes. Registered apprenticeships help produce individuals who are competent in the work processes and skills associated with a trade or vocation. Registered programs that are also accredited through regional or national accrediting agencies also ensures the quality and value of apprenticeships being offered by sponsors.

[Whereupon, at 12:11 p.m., the subcommittee was adjourned.]

○