

Testimony of

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HARDI

HEATING AIR-CONDITIONING REFRIGERATION DISTRIBUTORS INTERNATIONAL

Submitted to the
Subcommittee on Innovation and Workforce Development

Hearing on
Mind the 'Skills' Gap: Apprenticeships and Training Programs

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Thank you for this opportunity to provide input on an important issue that affects many industries across the country. My name is Talbot Gee and I am the Chief Executive Officer of Heating, Air-conditioning, & Refrigeration Distributors International (HARDI), a trade association representing wholesale-distributors of heating, ventilation, air-conditioning, and refrigeration (HVACR) equipment, parts, supplies and controls.

HARDI is comprised of approximately 1,000 member companies, nearly 500 of which are U.S.-based wholesale distribution companies. More than 80 percent of HARDI's distributor members are classified as small businesses that collectively employ over 40,000 U.S. workers, representing more than \$35 billion in annual sales and an estimated 85 percent of the U.S. wholesale distribution market of HVACR products. HARDI members do business in every U.S. congressional district. Recently, 85 HARDI members came to Washington, DC to discuss issues important to our industry with legislators. One issue we have constantly discussed on Capitol Hill is the lack of qualified workers in the HVACR industry.

The Skills Gap in the HVACR Industry is Growing

The HVACR industry is vital to Americans' everyday lives. We supply the products that keep homes and businesses cool in summer and warm in winter. Our industry also supplies the commercial refrigeration used in a variety of industries ranging from the production, storage, and preparation of food and beverages to scientific research in hospitals and universities. The demand for jobs in the HVACR industry is also growing. According to the Bureau of Labor Statistics demand for HVACR mechanics and installers will grow at 15 percent between 2016 and 2026, twice the growth rate of all jobs.¹ This job growth is also accompanied by growing

¹ U.S. Bureau of Labor Statistics, U.S. Department of Labor Statistics, *Heating, Air Conditioning, and*

wages, the median wage in 2018 was \$47,610,² nearly 50 percent higher than the median individual wage in the United States.³ This growth of installers and mechanics must be matched with more workers to supply the products through wholesale distribution, additional manufacturing both domestically and abroad, and more engineers to design new equipment to meet changing customer needs. While many view HVACR as a low-to-medium skill industry, the industry as a whole needs workers ranging from high school graduates to advanced STEM degrees. Without systematic changes to how potential employees enter the industry, HVACR will not have enough employees to meet demand, and the employment gap will begin with technicians who install and repair HVACR equipment.

The need for technicians will ripple through every layer of the HVACR industry. Lack of workers will lead to increased labor costs for home builders, reduced sales for distributors, and a changing market for manufacturers. Perhaps the most important negative result will be air-conditioning becoming more expensive for middle class families, potentially moving it from a staple technology to a luxury item.

One of the most common statistics reported across the industry is that 25 percent of the technician workforce will reach retirement age by 2020. Additionally, the increased demand for air-conditioning will lead to a job growth rate of 15 percent.⁴ Based on the predicted losses due

Refrigeration Mechanics and Installers. 30 May 2019. www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm.

² *ibid*

³ Federal Reserve, Economic Data, Real Median Personal Income in the United States, 31 May 2019, <https://fred.stlouisfed.org/series/MEPAINUSA672N>.

⁴ U.S. Bureau of Labor Statistics, U.S. Department of Labor Statistics, *Heating, Air Conditioning, and Refrigeration Mechanics and Installers*. 30 May 2019. www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm.

to retirement and growth in demand, the HVACR industry will face a shortfall of more than 115,070 workers by 2022 (Figure 1).⁵

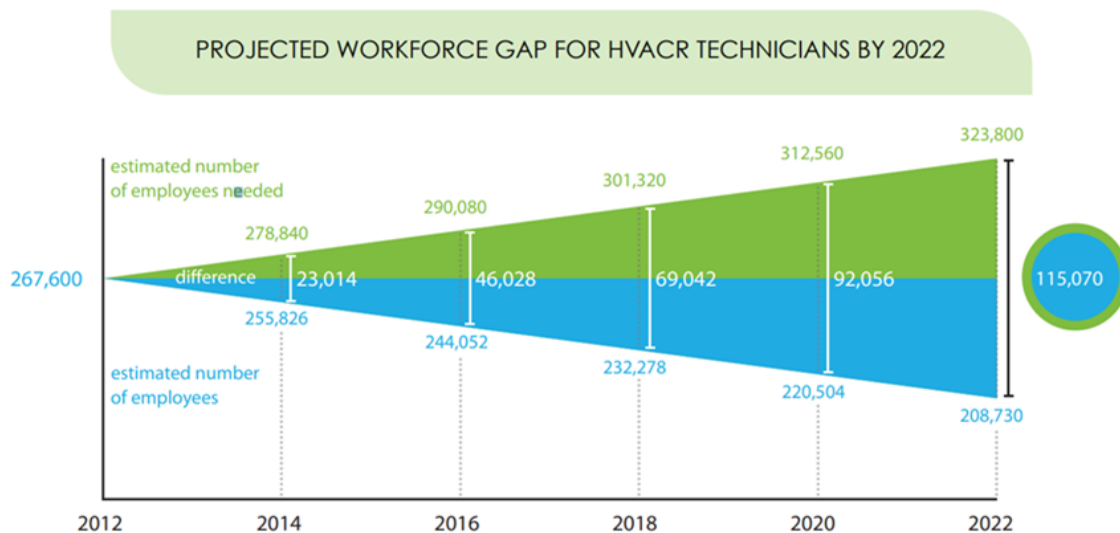


Figure 1: Projected Workforce Gap for HVACR Technicians in 2022

Even given the large number of opportunities, there is a lack of potential employees searching for careers in the HVACR industry. In a survey of HVACR instructors and administrators, 56 percent reported their programs were under-enrolled while only 10 percent reported their programs were over-enrolled (Figure 2).⁶ This reported lack of demand stems in part from the lack of information about the industry shared with students by the industry, trade schools, parents, and guidance counselors.

HVACR plays an important role in our everyday lives, but is one of the least thought about industries when students begin to look for careers. Only 3 percent of students are “extremely” or “very” aware of jobs in the HVACR industry, while 54 percent are “not at all”

⁵ HVACR Workforce Development Foundation, *The Next Generation of HVACR Installers and Technicians*, September 2015.
www.careersinhvacr.org/Portals/_Appleseed/documents/Supply%20ReportExecutive%20Summary%20Labor%20Report.pdf

⁶ *ibid*

aware.⁷ With such a steep lack of awareness about the industry, and the trades in general, it is difficult for students to find their way into well paid middle-skill careers in industries such as HVACR.

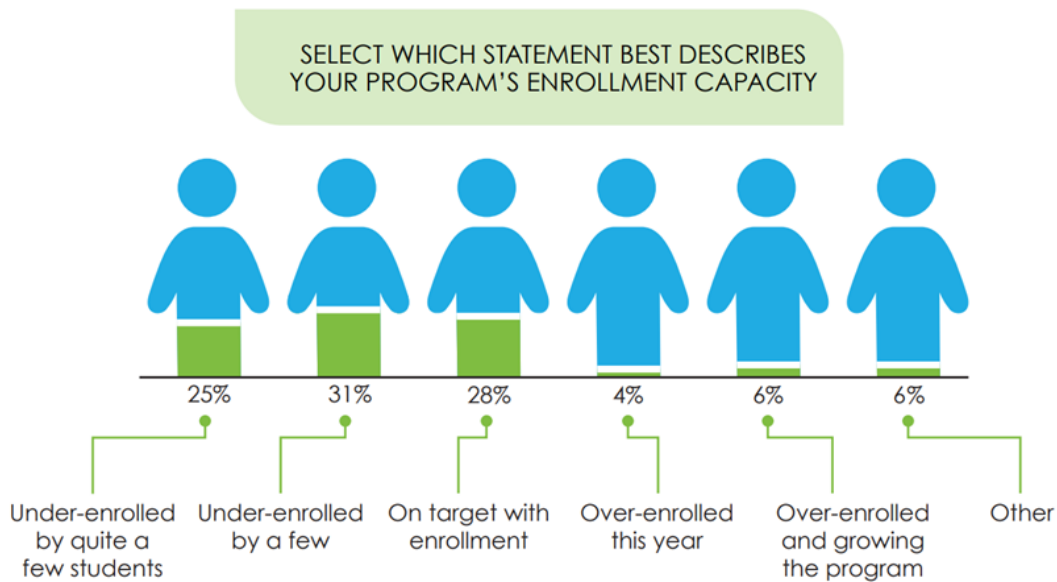


Figure 2: HVACR Program Enrollment Capacity

Using New Media to Reach Potential Employees

“Everybody says you should try college; you should at least try it. Which is a nice thought, but it’s a really expensive thought.”⁸ This is the quote that starts the documentary “Hot Commodity” commissioned by HARDI with the purpose of attracting students and potential employees to the HVACR industry. HARDI premiered the documentary at our annual conference in December and we expect the film to be available on Netflix later this year. The documentary spotlights members from across the HVACR distribution and technician community while promoting the wide variety of jobs available in the industry that do not require a four-year degree but still provide a quality income and work-life balance. More

⁷ EGIA Foundation, *Bridging the HVAC Employment GAP*, 2018, <https://egiafoundation.org/report>.

⁸ HARDI, *Hot Commodity*, Trailer, 2018. www.vimeo.com/298687332.

information about HARDI’s workforce recruitment initiative and the documentary can be found at www.hardinet.org/workforce-recruitment/.

A survey of owners of contracting companies specializing in HVACR identified several negative public perceptions about the industry that could lead a potential employee away from a career in HVACR. In addition to negative perceptions about the industry, two of the most common perceptions were based on the bias that students must go to college: education focuses students on a four-year degree and all “good” jobs require a college degree (Figure 3).⁹ This bias towards college and away from trades has led to a lack of awareness of the industry and is preventing students from entering HVACR. Without changing the bias away from trades there will be no way to prevent the growing skills gap.

An additional survey found that the top five career characteristics are easily attainable

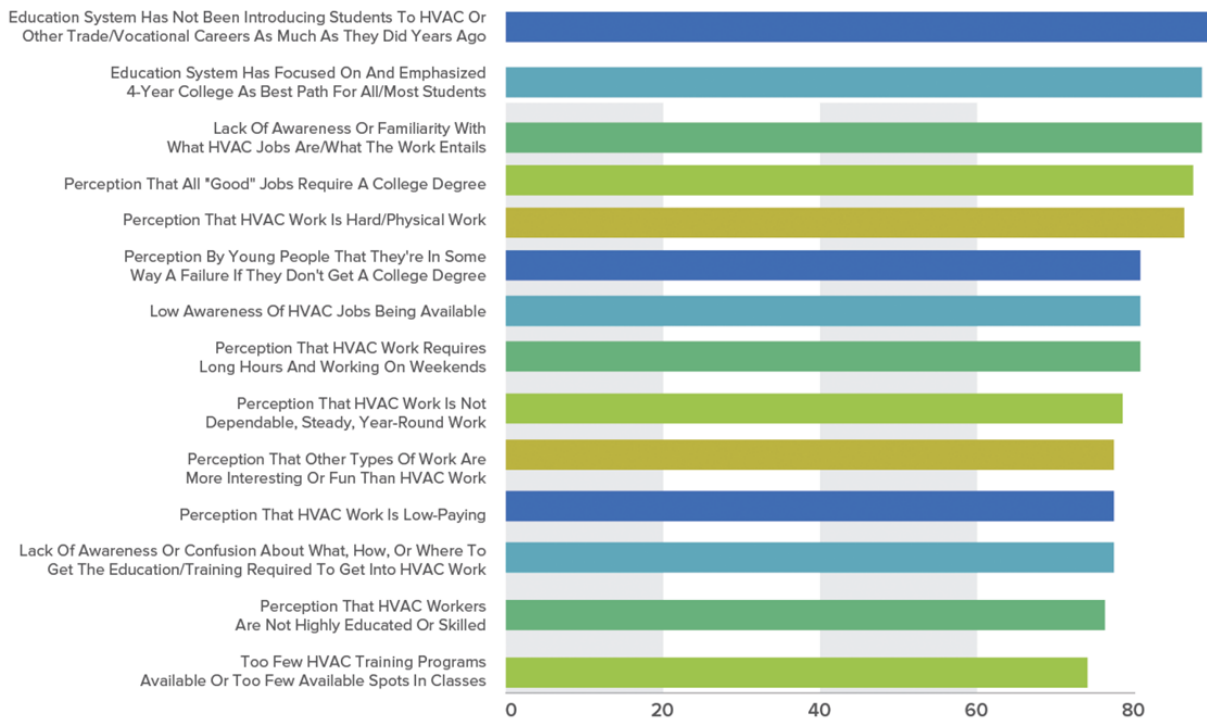


Figure 3: Negative Perceptions Biasing the Choice to Pursue a Trade Career

⁹ EGIA Foundation, Bridging the HVAC Employment GAP, 2018, www.egiafoundation.org/report.

in the HVACR industry. According to students and parents surveyed, the top five characteristics students are looking for in a future career include: something the student is interested in, good job security, offers steady year-round work, good opportunities for advancement, and good potential for increasing earnings (Figure 4).¹⁰ A similar survey of HVACR contractors found several corresponding attributes including: easy to get started in and provide growth and advancement, in demand and available anywhere in the U.S., able to provide good job security/stability, and steady year-long work opportunities. Given these positive attributes, it is easy to see why students who enter apprenticeships and training programs have high rates of

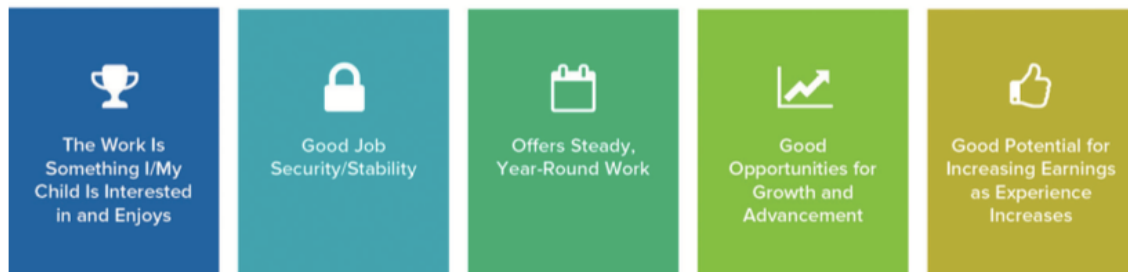


Figure 4: Top 5 Career Characteristics From Students and Parents

retention in the industry.

Apprenticeships and training programs are better at retaining students than four year colleges

According to the Department of Labor, less than 30 percent of college graduates plan to have the same job three years after graduation, while registered apprenticeships have an 89 percent retention rate three years after completion.¹¹ Additionally, more than 90 percent of individuals completing an apprenticeship retain employment.

¹⁰ *ibid*

¹¹ U.S. Department of Labor, *Apprenticeships ROI Research and Statistics*, www.apprenticeshipusa.workforcecegs.org/-/media/Communities/21stcenturyapprenticeship/Files/Apprenticeship-ROI-Research-and-Statistics.ashx?la=en

Training programs also maintain high completion rates and result in employment in the HVACR industry. According to a survey by the HVACR Workforce Development Foundation, only 16 percent of students fail to complete the course without attaining employment in the field.¹² Some training programs also offer high school students the ability to graduate with a professional certificate upon completion of high school allowing students to enter the workforce at a younger age.

Bias Against Trades Prevents Quality Candidates from Entering HVACR

Contractors and educators have pointed to perceived stereotypes against the trades as one reason there are a lack of qualified candidates entering the industry. Far too often mass media portrays students entering trade schools as troubled and lesser academically than their four-year college peers. The push for students to go to college has caused nearly a third of middle skilled positions to seek candidates with an unneeded bachelors degree.¹³ This up-credentialing puts pressure on students to seek out the four-year college path when more than 80 percent of job opportunities in HVACR do not require a bachelors degree.

Students also receive pressure from parents to attend college. According to one survey, “51 percent of parents expect their child to attend a four-year college.”¹⁴ When students are asked a similar question, 61 percent expect to attend a four-year college while only 10 percent

¹² HVACR Workforce Development Foundation, *The Next Generation of HVACR Installers and Technicians*, September 2015, www.careersinhvacr.org/Portals/_Appleseed/documents/Supply%20ReportExecutive%20Summary%20Labor%20Report.pdf

¹³ HVACR Workforce Development Foundation, *Heating Up: The Sweltering Demand for Heating, Ventilation, Air Conditioning, and Refrigeration Workers*, July 2015, www.careersinhvacr.org/Portals/_Appleseed/documents/Demand%20ReportHeating%20Up%20-%20The%20Sweltering%20Demand%20for%20HVACR%20Workers.pdf

¹⁴ EGIA Foundation, *Bridging the HVAC Employment GAP*, 2018, www.egiafoundation.org/report.

expect to attend a trade school.¹⁵ Educators have long touted the benefits of a college degree, and rightly stated that college graduates earn more than their peers with a high school diploma or G.E.D., unfortunately less than half of students admitted to a four-year program actually graduate.¹⁶ Moving more students into well paid trades could reduce this dropout rate.

With so many students pursuing college, many of the remaining candidates are underprepared for work in HVACR. According to one survey, 63 percent of students lack math and critical thinking skills, 54 percent lacking general education readiness, and 32 percent lack verbal communication skills.¹⁷ This lack of basic skills requires many training programs to teach skills to bring students to a level where they can be effective in learning the trade. This remedial education delays students from entering the workforce and further reinforces the stereotype that trade schools are for student struggling academically.

Another source of students entering training programs are considered “second-career adults.” These students are between 22 and 29 years old with a majority changing from their original career path.¹⁸ A survey of contractors found that 31 percent had a four-year degree, unfortunately it did not report how many degrees were in unrelated fields.¹⁹ Removing the bias from trades would allow more students to choose HVACR as a first career path.

Businesses Promote HVACR Industry Locally

The tightening labor market has made it even more important for small businesses to

¹⁵ *ibid*

¹⁶ National Center for Education Statistics, Digest of Education Statistics, *Graduation rate from first institution attended for first-time, full-time bachelor's degree-seeking students at 4-year postsecondary institutions*, https://nces.ed.gov/programs/digest/d17/tables/dt17_326.10.asp

¹⁷ EGIA Foundation, Bridging the HVAC Employment GAP, 2018, www.egiafoundation.org/report.

¹⁸ *ibid*

¹⁹ *ibid*

recruit students as early as possible into the HVACR industry. Several HVACR businesses have developed programs to bring students into the HVACR industry:

- 1) DiFilippo's Service, Wayne, Pennsylvania (Pennsylvania 6th Congressional District)
 - a) DiFilippo's Service has expanded their presence at job fairs with the intention of educating more students and parents on the benefits of working in the HVACR industry. DiFilippo's works directly with Chester County Technical College and local high schools' Cooperative Education Programs to find apprentices. Qualified applicants are invited to tour the office and state of the art training facility. Once an applicant joins an individual or group training program they are able to use a mix of classroom time for learning theory and lab work to develop hands on skills. Apprentices also utilize outside classes for specialized training. After finishing their classroom education, apprentices participate in extensive hands-on training with experienced technicians.²⁰
- 2) Auer Steel & Heating Supply Company, Milwaukee, Wisconsin (Wisconsin 4th Congressional District)
 - a) Auer Steel utilizes local high school technical education programs to create a pipeline of interested students in HVACR. Auer Steel Director of Business Development Jon Hirsch has presented to over 5,000 high school students and led over 250 in-classroom presentations throughout Wisconsin and Minnesota. Auer Steel has also developed and launched a five day "Intro to HVAC" training at Horlick High School in Racine, WI which introduces students to careers in HVAC and provides parents with materials explaining the benefits of working in HVACR. Partnering with technical education teachers through

²⁰ Laura DiFilippo, President, Difilippo's Service

the Wisconsin Technical Educators Association, Minnesota Tech Engineering Educators Association and 12 technical colleges, Auer steel has developed a pipeline to connect students with the HVACR industry. Auer Steel also helps high school seniors dual enroll and receive credit for graduation from local technical programs jumpstarting their careers in the industry. Finally, Auer Steel connects technical program graduates with employers across Wisconsin, Minnesota, and North Dakota to be placed in a career.²¹

3) Isaac Heating & Air Conditioning, Rochester, New York (New York 25th Congressional District)

a) Isaac Heating & Air Conditioning created Isaac University in 2001 as a way of increasing the technical capabilities of their employees. After seeing success educating employees, Isaac opened up the program to members of the public seeking careers in the industry. Today Isaac University employs a fulltime training director, a second fulltime instructor, and a part-time administrator to manage its 16 training programs. To further expand the program Isaac University created a “boot camp” where students with no experience attend 40 hours of paid training per week for 12 weeks with the guarantee of a fulltime position upon completion. Boot camp students may receive up to 18 credit hours with Monroe Community College towards an Associates Degree in HVAC Technology. Since 2015, 74 students have graduated from the boot camp with nearly 75 percent still working in the industry.²²

Congress can make Apprenticeships, Training Programs, and Jobs in HVACR more attractive

²¹ Jon Hirsch, Director of Business Development, Auer Steel & Heating Supply Co.

²² Eric Knaak, Isaac Heating & Air Conditioning

HARDI is encouraged by progress that has been made in Congress and federal agencies to improve apprenticeships and technical programs, but more progress is needed. Last year, HARDI supported passage of the *Strengthening Career and Technical Education for the 21st Century Act* to reauthorize the Carl D. Perkins Career and Technical Education program, also known as Perkins V.²³ This legislation authorizes Congress to appropriate up to \$1.2 billion for local career and technical education programs. Increasing funding for these programs will help introduce students to the trades earlier. Starting on July 1, 2019, Perkins V allows local stakeholders, like HVACR distributors and technicians, to provide input on the curriculum used to teach students about the trades. States are also increasing funding for career and technical education, a recent Columbus Dispatch Editorial supported Lt. Governor Husted's request for \$69 million for workforce education to prepare students for careers in the trades.²⁴ HARDI encourages Congress to continue to fully fund this important program.

Another priority that will help attract students into apprenticeships is extending the use of 529 account funds to apprenticeship materials and tools. The House of Representatives recently passed legislation that includes a provision allowing 529 tax advantaged funds to be used for materials necessary for apprenticeships. This commonsense policy change will put apprentices on par with four-year college students using tax advantaged funds for college materials. HARDI encourages Congress to adopt language from the *529 OPTIONS Act*²⁵ allowing

²³ U.S. Congress, House, *Strengthening Career and Technical Education for the 21st Century Act*, HR 2353, 115th Congress, 1st session, www.congress.gov/bill/115th-congress/house-bill/2353

²⁴ Editorial Board, *Lawmakers should include workforce development in state budget*, Columbus Dispatch, 31 May 2019, www.dispatch.com/opinion/20190531/editorial-lawmakers-should-include-workforce-development-in-state-budget

²⁵ U.S. Congress, House, *529 OPTIONS Act*, HR 2679, 116th Congress, 1st session, www.congress.gov/bill/115th-congress/house-bill/2679

apprentices to use 529 funds for apprenticeship materials and tools.

HARDI also supports legislation that allows employers to offer more flexibility to employees. HARDI has long supported the *Working Families Flexibility Act*²⁶ which allows employees the option of receiving compensatory time (comp time) in lieu of overtime pay. Employers would be required to give workers the same value in comp time as overtime pay, meaning employees would receive one and a half hours comp time for every hour of overtime worked. Many HVACR distribution positions are well paid and do not require employees to work overtime to make ends meet, this added flexibility would be welcomed by potential employees. According to a Bentley University study, 77 percent of millennials believe that a flexible work schedule would make them more productive (Figure 5).²⁷ As more technicians use smartphones and mobile devices to receive job notifications at all hours of the day, workers are no longer bound to the 9-to-5 routine. Allowing workers to receive comp time is an easy way to provide flexibility in the workplace that no longer follows set hour. HARDI encourages Congress



Figure 5: Millennials are Seeking Flexibility in the Workplace

²⁶ U.S. Congress, Senate, *Working Families Flexibility Act*, S 1043, 116th Congress, 1st session, www.congress.gov/bill/116th-congress/senate-bill/1043

²⁷ Bentley University, *The Millennial Mind Goes to Work*, October 2014, www.bentley.edu/newsroom/latest-headlines/mind-of-millennial

to pass the *Working Families Flexibility Act*.

In addition to bills currently in Congress, HARDI supports recent actions by the Department of Labor to develop a pilot program for “Industry Recognized Apprenticeship Programs.”²⁸ This program allows trade associations to recognize apprenticeship training programs without the requiring that the programs receive government approval. The current iteration is a pilot program that excludes construction apprenticeships. HARDI encourages Congress to work with the Department of Labor to develop the “Industry Recognized Apprenticeship Program” into a full program usable by all industries.

Lastly, HARDI is concerned recent technological developments are making regulations developed under the *Fair Labor Standards Act* (FLSA)²⁹ burdensome by not accounting for modern technology. As an example, many distributors must currently police the use of work smartphones afterhours to prevent employees from working overtime without proper reporting. Under the current interpretation of FLSA, if an hourly employee answers a call or an email from a customer and does not report it, the employer is legally liable for not paying the employee overtime. Millennials entered the workforce at a time when they are always connected and 89 percent report checking emails afterhours.³⁰ Since employers have no ability to prevent employees from answering their phones or checking email afterhours, other than setting a company policy it is difficult for employers to stay in compliance even while making

²⁸ U.S. Department of Labor. (2018). “Creating Industry-Recognized Apprenticeship Programs to Expand Opportunity in America” (Notice No. 3-18). Washington, DC: U.S. Department of Labor.

²⁹ United States. 2011. The Fair Labor Standards Act of 1938, as amended. Washington, D.C., U.S. Dept. of Labor, Wage and Hour Division.

³⁰ Bentley University, *The Millennial Mind Goes to Work*, October 2014, www.bentley.edu/newsroom/latest-headlines/mind-of-millennial

every attempt to comply with FLSA. HARDI encourages Congress to make a deliberate evaluation of the *Fair Labor Standards Act*. Reviewing FLSA will ensure technology does not cause unwanted problems for small business owners while protecting the rights of workers. Congress should make recommendations for regulators to make changes if an Act of Congress is unnecessary.

Conclusion

HARDI once again thanks the Committee for holding a hearing on the importance of apprenticeships and trade programs in reducing the skills gap. Additional information on the technician skills gap is available from HARDI's industry partner trade associations: Air Conditioning Contractors of America and Plumbing-Heating-Cooling Contractors Association (PHCC). The HVACR industry is facing a drastic shortfall of technicians in a few short years unless more students and potential employees can be introduced to the industry. Apprenticeships and training programs work to bring employees into the HVACR industry, but without removing the bias away from trades not enough students will seek careers in HVACR. With some of the small changes recommended in this testimony it is possible to close some of the gap and HARDI encourages Congress to work together to pass these important changes.

Figure References:

Figure 1: HVACR Workforce Development Foundation, *The Next Generation of HVACR Installers and Technicians*, September 2015.

www.careersinhvacr.org/Portals/_Appleseed/documents/Supply%20ReportExecutive%20Summary%20Labor%20Report.pdf.

Figure 2: HVACR Workforce Development Foundation, *The Next Generation of HVACR Installers and Technicians*, September 2015.

www.careersinhvacr.org/Portals/_Appleseed/documents/Supply%20ReportExecutive%20Summary%20Labor%20Report.pdf.

Figure 3: EGIA Foundation, *Bridging the HVAC Employment GAP*, 2018,

www.egiafoundation.org/report.

Figure 4: EGIA Foundation, *Bridging the HVAC Employment GAP*, 2018,

www.egiafoundation.org/report.

Figure 5: Bentley University, *The Millennial Mind Goes to Work*, October 2014,

www.bentley.edu/newsroom/latest-headlines/mind-of-millennial