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August 1, 2022

Loan Programs Office
Attn: LPO Legal Department
U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

**Re: IBEW Comments on Title XVII Loan Guarantee Program Request
for Information (Docket No. DOE-2022-11734)**

To whom it may concern:

The International Brotherhood of Electrical Workers, AFL-CIO, CLC (IBEW) appreciates this opportunity to comment on the Department of Energy (DOE's) Request for Information on the Innovative Technologies Loan Guarantee Program (Title XVII Loan Guarantee Program).¹ The IBEW is a labor organization representing approximately 775,000 active and retired members, including approximately 400,000 members working in the construction industry. The highly skilled and trained professionals of the IBEW routinely build and maintain all types of energy facilities and infrastructure.

The IBEW submits these comments to offer policy recommendations with respect to project construction costs in response to Question D-4 of the RFI, which requests approaches to modifying the application process or requirements in a manner that will improve implementation of the Title XVII Loan Guarantee Program.² The IBEW believes that the recommendations set forth herein will also respond to the Administration's goals of addressing the climate crisis³ and advancing equity⁴ by creating well-paying jobs and expanding job opportunities for disadvantaged and marginalized communities in deploying clean energy technologies and building this infrastructure.

A. *Apprenticeship utilization*

As part of the application process, DOE should require eligible entities to self-certify that they will utilize contractors and subcontractors who participate in, or commit to participating in, quality registered apprenticeship programs as

¹ *Request for Information on Innovative Technologies Loan Guarantee Program*, Docket No. DOE-2022-11734, 87 FR 33141 (Jun. 1, 2022).

² 43 U.S.C. §§ 1332, 1337(p).

³ Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, 86 FR 7619 (Feb. 1, 2021).

⁴ Executive Order 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, 86 FR 7009 (Jan. 20, 2021).





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described below. Such a requirement will address two important DOE goals. First, it will help grow a well-trained and qualified workforce that DOE and recipients of assistance may utilize on future projects. Second, the rigorous training workers receive in registered apprenticeship programs will ensure safety and efficiency on DOE projects.

Measures to promote quality training for the next generation of construction workers are critical. In a recent survey of construction firms across the country, over 70 percent of respondents reported that they anticipate a labor shortage to be the biggest hurdle in coming years.⁵ According to the Centers for Disease Control and Prevention, the industry's average age of retirement is 61, and more than one in five construction workers are currently older than 55. Skilled craft labor variability poses major risks to project safety and leads to significantly higher growth in cost overrun, time overrun, and reduced productivity.⁶ These risk factors compound each other. For example, because projects with skilled craft worker shortages face scheduling constraints, workers are frequently scheduled to work overtime, which "can cause physical fatigue on craft workers [and] seriously affect the implementation of construction site safety."⁷ As such, research has shown a *positive exponential relationship* between increased skilled craft labor recruiting difficulty and Occupational Safety and Health Administration (OSHA) incidents.⁸

Union apprenticeship programs mitigate these risks. Empirical studies have shown that registered apprenticeship requirements on public works projects produce significant benefits for procurement authorities because apprentices always work under the supervision of experienced journey-level workers.⁹ In addition to

⁵ See Associated General Contractors of America, 2020 Construction Outlook Survey.

⁶ Hossein Karimi, *Quantitative Analysis of the Impact of Craft Labor Availability on Construction Project Performance*, University of Kentucky (2017), https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1059&context=ce_etds; see also Allison L. Huang, et al., U.S. Department of Commerce, National Institute of Standards and Technology, Office of Applied Economics, *Metrics and Tools for Measuring Construction Productivity: Technical and Empirical Considerations* (Sept. 2009), http://www.nist.gov/customcf/get_pdf.cfm?pub_id=903603.

⁷ Karimi, *supra* note 7 (internal citations omitted).

⁸ *Id.*

⁹ See Washington State Department of Labor and Industry & Washington State Department of General Administration, *Apprenticeship Utilization 2009 Legislative Update* (Dec. 2009); Washington State Department of Transportation, *Apprenticeship Utilization Advisory Committee Report* (Jan. 2008). See also U.S. Office of Management and Budget, *Task Force on Apprenticeship Expansion: Final Report to the President of the United States* (2018), <https://omb.report/icr/201812-1205-001/doc/88448201> (apprenticeship programs increase productivity and are a "key tool for addressing America's skills gap."); U.S. Department of Commerce and Case Western Reserve University, *The Benefits and Costs of Apprenticeship: A Business Perspective* (2016),





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mitigating the risk factors discussed above, research has shown that apprenticeship requirements generally increase the number of project bidders and reduce bid costs for affected projects.¹⁰

Union referral systems provide the project's contractors with easy access to workers whom the unions have screened, according to objective criteria, to ensure they meet the job requirements. While the contractors maintain final say over who they hire, the referral system is designed to quickly bring them qualified applicants. When local workers are in short supply, unions put out the call to their affiliates around the country, whose members have similarly been trained with portable skills.

Numerous studies of Registered Apprenticeship Programs around the country show that these programs can significantly improve diversity and equity in the workforce.¹¹ One such study compared union and nonunion construction apprenticeship programs in the Portland, Oregon area, and found that union apprenticeship programs provide significantly better outcomes overall for women and people of color compared to nonunion programs, and that union programs have greater apprenticeship diversity in terms of both gender and race.¹²

<https://files.eric.ed.gov/fulltext/ED572260.pdf> (apprenticeship programs are cost-effective due to higher worker productivity, improved safety and project quality, reliable project staffing, and reduction in employee turnover).

¹⁰ *Id.*

¹¹ See, e.g., Frank Manzo and Robert Bruno, *The Apprenticeship Alternative: Enrollment, Completion Rates, and Earnings in Registered Apprenticeship Programs in Illinois*, Illinois Economic Policy Institute (Jan. 2020), <https://illinoisepi.files.wordpress.com/2020/01/ilepi-pmcr-the-apprenticeship-alternative-final.pdf> (finding that between 2000 and 2016, more than 74,000 construction apprentices (97 percent) were enrolled in joint labor-management programs, compared to less than 2,000 in employer-only programs, with joint programs enrolling 98 percent of all women, 99 percent of all African American apprentices, 98 percent of all Latino apprentices, and 97 percent of all military veterans); Building Trades of Minnesota, "Registered Apprenticeship in the Construction Trades," <https://mntrades.org/apprenticeship/> (Approximately 5 percent of the total construction workforce were people of color, compared to 20.5 percent of union construction apprentices; apprenticeship completion rates for minority apprentices increased 339 percent between 2012 to 2019); Lawrence Mishel, Economic Policy Institute, *Diversity in the New York City union and nonunion construction sectors* (Mar. 2017), <https://www.epi.org/publication/diversity-in-the-nyc-construction-union-and-nonunion-sectors/>.

¹² Larissa Petrucci, PhD, *Constructing a Diverse Workforce: Examining Union and Non-Union Construction Apprenticeship Programs and their Outcomes for Women and Workers of Color*, University of Oregon, Labor Education and Research Center (2021), https://cpb-us-e1.wpmucdn.com/blogs.uoregon.edu/dist/a/13513/files/2021/11/Constructing_A_Diverse_Workforce.pdf.



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Apprenticeships are vital to creating a strong economy and rebuilding the middle class, and are the most effective, time-tested method of training electrical workers in an industry replete with physical hazards. Utilizing Registered Apprenticeship programs ensures that work is performed by highly skilled, trained personnel and provides a reliable supply of workers that can successfully complete construction projects, thereby ensuring a return on the public investment.

The IBEW understands firsthand the numerous benefits of quality, formalized training in the electrical construction industry. Over 70 years ago, the IBEW and the National Electrical Contractors Association (NECA) developed the Electrical Training Alliance (Alliance).¹³ The Alliance has trained and graduated over 350,000 apprentices, making it the largest training program for electrical workers in the nation. The Alliance currently has some 300 construction training centers in operation¹⁴ and makes almost \$200 million in annual investments in apprenticeship training efforts. Such training is provided at no cost to participants or taxpayers. Apprentices learn while they earn, and also receive health and retirement benefits.

To combat the inherent safety risks of electrical construction and ensure that projects are completed successfully, journey-level IBEW members obtain numerous safety and technical certifications as part of their apprenticeship training. IBEW apprenticeship students receive hands-on experience and electrical, mechanical and construction theory classroom fundamentals. The typical IBEW apprenticeship program is three to five years in length. Apprentices also train in blueprint reading, mathematics, electrical code requirements, safety, first aid, conduit installation, wiring, outlets, and switches. Apprentices furthest along in their training work on planning the construction and testing the operation of an entire electrical system. IBEW electricians also obtain additional qualifications in various continuing education courses due to the ever-evolving technological advancements and safety imperatives that frequently arise within the electrical field.

B. Responsible contracting requirements

Despite the many protections to ensure federal contractors pay decent wages, provide safe workplaces, and respect workers' rights on the job, the government frequently contracts with companies with long records of workplace violations.¹⁵ Contracting with such companies "frequently results in poor

¹³ Electrical Training Alliance, <https://www.electricaltrainingalliance.org/training/outsideLineman>.

¹⁴ A map of the joint training programs of the National Electrical Contractors Association (NECA) and the IBEW is available at <http://www.electricaltrainingalliance.org/locateaTrainingCenter/Inside>.

¹⁵ Karla Walter, et. al, *Federal Contractors are Violating Workers' Rights and Harming the U.S. Government*, Center for American Progress Action Fund (Jan. 21, 2022),





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performance of federal contracts and waste of public resources.”¹⁶ Conversely, policies that “increase compliance with worker protection laws may result in improved contract performance and support good value for public investments.”¹⁷ Responsible contractor standards are a powerful tool to ensure work quality and safety, and avoid using public funds to support low-wage jobs.

The IBEW urges DOE to adopt responsible contracting requirements to ensure that the Title XVII Loan Guarantee Program funds projects developed by responsible companies with sufficient qualifications, resources and personnel for successful project delivery. In addition, by ensuring that contractors have the proper certifications to perform work in a given jurisdiction, these requirements can also have the effect of increasing the use of local labor. The requirements should include, at a minimum:

- a. Labor standards compliance self-certification and exclusion of serial law violators: project owner/contractor and subcontractors must attest, under penalty of perjury, that they have had no project defaults or law violations of any kind that have resulted in penalties, back pay, etc. over a specified amount (i.e., \$5,000) within the last three (3) years.
- b. Use of Registered Apprenticeship Programs. This will ensure all construction work is performed by appropriately skilled and trained personnel, leading to successful and timely project delivery.
- c. Self-certification by contractors and subcontractors that they possess all necessary licenses, registrations, certificates or permits as required by applicable state or local law.
- d. Self-certification by contractors and subcontractors that they possess all technical and industry-specific qualifications, equipment, financial resources, and personnel needed complete the project successfully.
- e. Monitoring and enforcement provisions, including disqualification/debarment and penalties for those that submit false or inaccurate information.

<https://www.americanprogressaction.org/issues/economy/reports/2022/01/21/181133/federal-contractors-violating-workers-rights-harming-u-s-government/>.

¹⁶ *Id.*

¹⁷ *Id.*





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C. Preference for supporting quality pre-apprenticeship programs

In addition, we recommend that DOE give preference to eligible entities that commit to funding or otherwise supporting quality pre-apprenticeship programs that partner with organized labor to target historically marginalized community groups.

As noted above, the Alliance was created over 70 years ago as a joint training program between the IBEW and NECA and has developed into the largest apprenticeship and training program of its kind, having trained over 350,000 apprentices to journeyman status through local affiliate programs. The Alliance sponsors its own Pre-Apprenticeship Program that increases the participation rates of underrepresented and historically marginalized populations in IBEW/NECA Registered Apprenticeship Programs. The program targets women, people of color and veterans. The program analyzes pre-apprentices' deficiencies in core subject areas through standardized assessment instruments and individualized instruction. Once identified, individuals are given assistance to help prepare for the rigors of the 5-year registered apprenticeship program. Training involves basic electrical-industry standards and job-readiness skills. ETA's network of over 100 industry partners provides workforce knowledge and on-the-job work training to prepare pre-apprentices to become apprentices in Registered Apprenticeship Programs.

IBEW also partners with other pre-apprenticeship programs focused on creating career pathways into the building trades for underserved populations. For example, Pathways to Apprenticeship, Inc. in Syracuse, New York, works to assist individuals from low-income communities, including the formerly incarcerated, to be admitted into a building trades apprenticeship program.¹⁸ Currently, 23 percent of program participants are women, and 93 percent are people of color.

Pre-apprenticeship programs offer a direct entry point into apprenticeship programs upon completion. They thus can be an effective vehicle to streamline the recruitment process and provide a clear pathway for underrepresented populations to secure apprenticeships and career placements.

D. Conclusion

A substantial body of research shows that the benefits of labor standards outweigh the costs.¹⁹ Studies on the actual impacts of increases in minimum and living wages have found the price and employment effects to be negligible, while

¹⁸ Pathways to Apprenticeship, <https://p2atrades.org/>.

¹⁹ See, e.g., Carol Zabin and Jenifer MacGillvary, *Putting California on the High Road: A Jobs and Climate Action Plan for 2030* (June 2020), <https://laborcenter.berkeley.edu/wp-content/uploads/2020/08/Chapter-2-Demand-Side-Workforce-Policy-Levers-Putting-California-on-the-High-Road.pdf> (internal citations omitted).





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worker incomes have been substantially improved. In construction, numerous studies have shown that mandates for high-road labor standards have not raised costs where they have been implemented, as productivity improvements make up for higher wages and benefits. Moreover, cost increases due to higher compensation may lead to negligible or minimal overall cost increases, since labor costs are often a small percentage of production costs.

Meeting the ambitious climate imperatives of the Biden administration will be determined by how quickly and efficiently renewable and low-carbon energy sources reach the public. Our highly specialized training programs and recruitment of underserved communities ensure safety, equity, and environmental justice remain guiding principles, along with reliability, professionalism, and dedication to shared economic growth through worker empowerment.

Once again, we appreciate this opportunity to comment and look forward to assisting the Department of Energy in expanding our nation's energy infrastructure.

Please note that the IBEW's principal point of contact on this matter is Taylor Waites, who can be reached at (202) 728-6046 or by email to Taylor_Waites@ibew.org.

Sincerely yours,

Lonnie R. Stephenson
International President

LRS:efw

