COMMITTEE ON
ENERGY & COMMERCE
CHAIRMAN FRANK PALLONE, JR.

MEMORANDUM

February 22, 2019

To: Subcommittee on Energy Members and Staff

Fr: Committee on Energy and Commerce Staff

Re: Hearing on "Clean Energy Infrastructure and the Workforce to Build It"

On **Wednesday, February 27, 2019, at 10:30 a.m. in room 2322 of the Rayburn House Office Building**, the Subcommittee on Energy will hold a hearing entitled, "Clean Energy Infrastructure and the Workforce to Build It." This is a legislative hearing on H.R. 1315, the "Blue Collar to Green Collar Jobs Development Act of 2019" introduced by Subcommittee on Energy Chairman Bobby L. Rush on February 22, 2019.

I. BACKGROUND

A. Minority Underemployment and Inclusion in the Energy Industry and STEM Fields

Historically, there has been a consistent gap in employment rates and earnings between whites and racial minorities in the U.S labor force. As of January 2019, the Bureau of Labor Statistics (BLS) reported that the unemployment rates for African Americans (6.8 percent) and Hispanics (4.9 percent) are significantly higher than those for whites (3.5 percent).[1]

Minorities are also underrepresented in the science, technology, engineering and math (STEM) fields, which include some of the fastest growing industries. While African Americans and Hispanics represent 27 percent of the overall workforce, they make up only 16 percent of the science and engineering workforce in the United States.[2] Although the United States had nearly 17.3 million STEM workers as of 2018, businesses have repeatedly voiced concerns over the short supply and availability of qualified STEM workers and the untapped potential for job opportunities for American workers in these fields.[3]

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[1] Bureau of Labor Statistics, Employment Situation Summary (www.bls.gov/news.release/empsit.nr0.htm) (Feb. 1, 2019).

[2] Pew Research Center, Diversity in the STEM workforce varies widely across jobs (www.pewsocialtrends.org/2018/01/09/diversity-in-the-stem-workforce-varies-widely-across-jobs) (Jan. 9, 2018).

[3] Pew Research Center, 7 facts about the STEM workforce (www.pewresearch.org/fact-tank/2018/01/09/7-facts-about-the-stem-workforce/) (Jan. 9, 2018). Deloitte, *2018 Deloitte skills gap and future of work in manufacturing study* (Oct. 2018).

B. U.S. Energy Job Opportunities

In 2017, the energy and energy efficiency sectors accounted for nearly seven percent of nationwide job creation, and the United States now ranks second globally for energy investment.[4] Nearly 3.2 million Americans work in solar, wind, energy efficiency, clean vehicles, energy storage, and related clean energy jobs.[5] In general, the energy sector remains less diverse than the national workforce.[6]

Jobs in clean energy can offer significant employment opportunities for minority workers. The vast majority of these clean energy jobs are in the same fields that people already work in today, including manufacturing, the construction and building trades, information technology and computer software design, engineering, sales and marketing, and operations and maintenance. These positions cannot be offshored, since they depend on domestic installation and building trades.

Solar Energy

Solar industry employment grew 70 percent between 2013 and 2018, resulting in 242,000 jobs across all 50 states.[7] According to recent BLS projections, solar photovoltaic (PV) installers will be one of the fastest growing occupations between 2016 and 2026.[8] About 155,000 solar jobs are in installation and project development. Solar PV installers' hourly median wages are competitive with similar industries, and well above the national median wage. In addition, more than half of U.S. solar workers spend a majority of their time on residential solar projects, which mostly occur in urban areas having considerable minority populations.[9] Even so, minorities account for a disproportionately small share of the overall solar workforce.[10]

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[4] National Association of State Energy Officials and Energy Futures Initiative, *2018 U.S. Energy and Employment Report* (May 2018). International Energy Administration (IEA), *World Energy Investment 2018* (Jul. 17, 2018).

[5] E2, Clean Jobs America 2018 (www.e2.org/reports/clean-jobs-america-2018) (May 16, 2018).

[6] U.S. Department of Energy, *U.S. Energy and Employment Report: January 2017* (Jan. 2017).

[7] The Solar Foundation, *National Solar Jobs Census 2018* (Feb. 7, 2018).

[8] Bureau of Labor Statistics, Employment Projections: Fastest growing occupations (www.bls.gov/emp/tables/fastest-growing-occupations.htm) (Apr. 11, 2018).

[9] *See* note 7.

[10] *Id.*

Wind Energy

More than 54,000 wind turbines operate in the United States and its territories, supporting 105,500 wind jobs.[11] Most of these jobs are in manufacturing and construction, including skilled workers who build turbine components and technicians who install and maintain turbines.[12] Manufacturing relies on an extensive supply chain, with over 500 factories across 41 states.[13] Projections show that wind turbine technicians will be one of the fastest growing job sectors between 2016 and 2026, with annual incomes ranging from $40,000 to $80,000.[14]

Energy Efficiency

The energy efficiency sector currently employs 2.25 million Americans.[15] It is now the fastest growing energy jobs sector, creating 133,000 jobs in 2017.[16] By 2030, the Department of Energy (DOE) appliance efficiency standards alone will have created 553,000 domestic jobs.[17] Examples of energy efficiency jobs include building and industrial facility energy auditors, insulation and weatherization technicians, electricians, and heating/air conditioning installers. Jobs indirectly related to the energy efficiency sector are projected to employ another 4.2 million Americans.[18]

Oil and Gas

The oil and natural gas industry employs more than 10.3 million Americans.[19] By 2035, that industry (along with the petrochemical sector) anticipates creating over 1.9 million new job opportunities, with African Americans and Hispanics projected, in one industry report, to make

[11] American Wind Energy Association, *Demand drives wind power development to new heights in first quarter of 2018* (May 2, 2018) (press release).

[12] National Association of State Energy Officials and Energy Futures Initiative, *2018 U.S. Energy and Employment Report* (May 2018).

[13] American Wind Energy Association, Made-in-the USA wind power jobs (www.awea.org/wind-101/benefits-of-wind/powering-job-growth) (accessed Feb. 13, 2019).

[14] *See* note 9. Bureau of Labor Statistics, Occupational Employment and Wages, May 2017 (www.bls.gov/oes/2017/may/oes499081.htm) (Mar. 30, 2018).

[15] *See* note 12.

[16] E2 and E4theFuture, *Energy Efficiency Jobs in America* (Sept. 2018).

[17] American Council for an Energy-Efficient Economy and Appliance Standards Awareness Project, *Jobs Created by Appliance Standards* (Jul. 2018).

[18] *See* note 16.

[19] American Petroleum Institute, *Impacts of the Oil and Natural Gas Industry on the US Economy in 2015* (Jul. 17, 2017).

up 38 percent of the newly created jobs.[20] Despite these trends, job growth in the oil and gas industry has decoupled from production. While employment is 20 percent lower than it was in 2014, oil and natural gas production have increased 25 and 19 percent, respectively.[21]

Coal

Coal mining currently employs 52,700 workers, marking a 39 percent employment decline over only one decade.[22] Hiring has bounced back slightly from its most recent low, but experts do not expect for that trend to continue or for the overall sector employment decline to reverse. According to researchers at Columbia University, "it is highly unlikely U.S. coal mining employment will return to pre-2015 levels, let alone the industry's historical highs."[23]

II. LEGISLATION

The focus of this hearing is on H.R. 1315, the "Blue Collar to Green Collar Jobs Development Act of 2019", introduced by Subcommittee Chairman Bobby Rush (D-IL) on February 22, 2019. Below is a summary of the bill's provisions.

TITLE I – OFFICE OF ECONOMIC IMPACT, DIVERSITY, AND EMPLOYMENT

Sec. 101. Name of Office.

This section amends section 211 of the Department of Energy Organization Act to rename the Office of Minority Economic Impact as the Office of Economic Impact, Diversity, and Employment.

Sec. 102. Energy Workforce Development Programs.

This provision directs the Secretary of DOE to establish and implement the workforce program described in Title II of the bill.

Sec. 103. Authorization.

Provides $100,000,000 annually for fiscal years 2020-2024 to fund the office and carry out the new workforce program.

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[20] American Petroleum Institute, *Minority and Female Employment in the Oil & Natural Gas and Petrochemical Industries, 2015-2035* (Mar. 2016).

[21] *The Great (and Possibly Fleeting) Oil and Gas Productivity Boom*, Bloomberg (Oct. 23, 2018).

[22] Bureau of Labor Statistics, Employment, Hours, and Earnings from the Current Employment Statistics survey (National) (data.bls.gov/timeseries/CES1021210001) (accessed Feb. 13, 2019).

[23] Columbia Center on Global Energy Policy, *Can Coal Make a Comeback?* (Apr. 25, 2017).

TITLE II – ENERGY WORKFORCE DEVELOPMENT

Section 201. Energy Workforce Development.

This section directs the Secretary of DOE to act through the Director of the Office of Economic Impact, Diversity, and Employment to establish and carry out "a comprehensive, nationwide program to improve education and training for jobs in energy-related industries." Among other things, it also encourages underrepresented groups, including religious and ethnic minorities, women, veterans, individuals with disabilities, and socioeconomically disadvantaged individuals to enter the STEM fields.

Further, the section mandates the Secretary of DOE provide direct assistance (including financial assistance awards, technical expertise, and internships) to educational institutions, local workforce development boards, State workforce development boards, nonprofit organizations, labor organizations, and apprenticeship programs. It also establishes a clearinghouse of information and resources on training and workforce development programs for energy-related jobs.

Additionally, this section requires the Secretary of DOE to collaborate with the Secretaries of Labor and Education to develop educational guidelines for institutions teaching energy and manufacturing efficiency, community energy resiliency, and conservation initiatives, to educate students and families. It also mandates outreach to minority-serving educational institutions and displaced and unemployed energy and manufacturing workers, with the objective of increasing the number of these individuals trained to work in the energy-related industries.

Finally, the provision authorizes $20 million per year for fiscal years 2020-2024 to carry out the section.

Section 202. Energy Workforce Grant Program.

This section establishes a program to provide grants to eligible businesses to pay new and existing employees receiving training to work in renewable energy, energy efficiency, and grid modernization sectors. The program gives priority to eligible businesses recruiting employees from local communities, minorities, women, foster children, persons who are transitioning from fossil energy sector jobs, or veterans; and they provide trainees with the opportunity to obtain real-world experience.

The provision authorizes $70 million annually for fiscal years 2020-2024 to carry out the grants provision established by this section.

Section 203. Definitions.

Provides definitions for the terms used in Title II.