

Congress of the United States
U.S. House of Representatives
Committee on Small Business
2361 Rayburn House Office Building
Washington, DC 20515-6515

MEMORANDUM

TO: Members, Subcommittee on Innovation, Entrepreneurship, and Workforce Development
FROM: Jason Crow, Chairman
DATE: July 27, 2021
RE: Subcommittee Hybrid Hearing: “Wealth for the Working Class: The Clean Energy Economy”

The Committee on Small Business Subcommittee on Innovation, Entrepreneurship, and Workforce Development will meet for a hybrid hearing titled, “Wealth for the Working Class: The Clean Energy Economy” **This hearing is scheduled to begin at 10:00 A.M. on Tuesday, July 27, 2021 in person in 2360 Rayburn House Office Building and via the Zoom platform.**

The clean energy economy has seen robust growth in recent decades and now presents the opportunity for widespread wealth creation that benefits American small businesses, their workers, and consumers. It has the potential to create millions of good-paying jobs spread across tens of thousands of businesses while simultaneously lowering energy prices for consumers. This hearing will focus on workforce development initiatives in the clean energy economy, discuss Congressional proposals regarding clean energy, and explore the potential for the growth this industry could unleash.

Panel

- Ms. Leticia Colon de Mejias, CEO, Energy Efficiencies Solutions, Windsor, CT.
- Mr. James Hasselbeck, Director of Operations, ReVision Energy, Inc., Portland, ME.
- Mr. Samuel Gilchrist, Western Campaigns Director, Natural Resources Defense Council, Denver, CO.
- Mr. Tom Greer, Proprietor/Owner, Hub City Brewing Co., Belen, NM.

Background

The clean energy economy is a broad term referring to several types of low-emissions energy generation, storage, transportation, and efficiency. Despite the decline in the industry during the COVID-19 pandemic, clean energy remains the biggest job creator in America’s energy sector, employing nearly three times as many workers as fossil fuel extraction and generation.¹ By the end of 2020, it employed 3,048,603 workers split between energy efficiency, renewable energy, clean vehicles, grid and storage, and biofuels.² This industry is dominated by construction,

¹ E2, *Clean Jobs America 2021*, April 19, 2021.

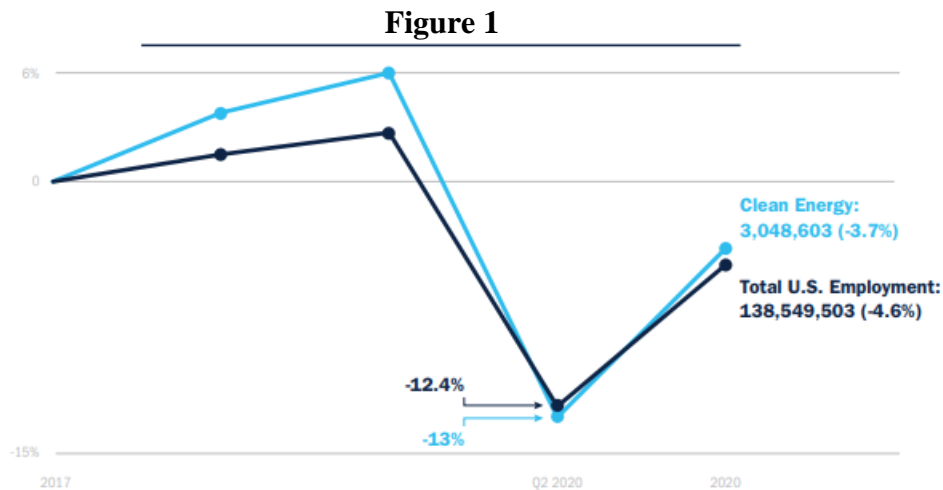
² *Id.*

manufacturing, and professional services jobs, which is largely made up of small businesses with fewer than 100 employees.³

Mitigating and even reversing the effects of climate change is one of the largest priorities of the President and the 117th Congress. This could spur trillions of dollars in investment in renewable energy, storage, electric vehicles, and energy efficiency. Given the nature of the industry, being labor intensive, this investment will also create millions of good-paying jobs. However, without adequate investment in workforce development to ensure a qualified workforce is available, the U.S. runs the risk of falling short of decarbonization goals.

The Clean Energy Economy

The clean energy economy is made up of roughly 35,000 businesses across the country employing over 3 million workers.⁴ Many of these businesses are small firms that serve their local areas and hire the local workforce. In fact, 89.5 percent of clean energy businesses have fewer than 100 employees, with nearly a third of these businesses containing fewer than five.⁵ Clean energy is the largest job creator in America’s energy sector, employing more people than middle and elementary school teachers, bankers, farmers, or real estate agents.⁶ These jobs also have a 25 percent higher median hourly wage than the national average and pay better than most fossil fuel extraction jobs.⁷ Despite the greater than average drop-off of jobs at the beginning of the COVID-19 pandemic, these jobs have been quicker to recover, now outpacing many other sectors in terms of job creation (Figure 1).



³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

Energy Efficiency

Energy efficiency is a key component to decarbonization efforts and makes up a large part of the jobs created in the clean energy economy. Since it is so labor intensive and most focuses on industries like construction, it is mostly made up of small firms around the country. It includes both the production and installation of energy saving products like equipment and appliances, electric or hybrid vehicles, and storage and distribution. In 2020, 2.38 million people worked in energy efficiency jobs, or roughly two-thirds of the clean energy industry.⁸ Small firms create many of these jobs in nearly every aspect of the sector, from innovation to production to construction and installation.

Many individuals and firms may elect to have energy efficient appliances installed in their homes or commercial spaces as well. This provides the opportunity to cut costs and consumption, saving money and adding to the bottom line. Not only does energy efficiency have the potential to create millions of jobs in the industry, it also has the potential to save expenses for consumers at the same time.

Renewable Energy

Renewable energy is derived from sources that can be produced or replenished naturally, as opposed to fossil fuels of which there is a limited supply and rely on millions of years of natural processes to produce. The primary sources of renewable energy are derived from the sun, the wind, and the flowing of water. These sources make up between 19-21 percent of energy consumption in the U.S. and are completely free of GHG emissions.⁹ All renewable sources employ 492,891 people across the country in 2021.¹⁰

Wind is the largest source of renewable energy used in the U.S., making up about 8.4 percent of total energy consumption.¹¹ It employs approximately 116,000 workers in the U.S. and is expected to have a market value of \$180 billion by 2027.¹² It also creates good-paying jobs, with the average salary in the industry is roughly \$76,336.¹³ Firms that install wind turbines are likely small businesses as well, with the average number of employees per establishment at just 10.¹⁴

Solar is also a major job creator in the energy sector. Despite accounting for only 2.3 percent of energy generation in the U.S., it accounts for roughly three out of five renewable energy jobs.¹⁵ With a total employment of 316,675 workers in 2020, it has the potential to create hundreds of thousands of good-paying jobs over the next decade if capacity is significantly increased as a viable

⁸ *Id.*

⁹ U.S. ENERGY INFORMATION ADMINISTRATION, *Frequently Asked Questions (FAQs)*, February 2021.

¹⁰ *Supra* note 1.

¹¹ *Supra* note 9t.

¹² GLOBE NEWSWIRE, *Wind Energy Market Worth \$180 billion by 2027, Says Global Market Insights, Inc.*, April 13, 2021.

¹³ PAYSACLE, *Salary for Industry: Wind Power Generation*, 2021.

https://www.payscale.com/research/US/Industry=Wind_Power_Generation/Salary

¹⁴ Thomas Crompton, *Wind Power in the U.S.*, IBIS WORLD INDUSTRY REPORT, May 2021.

¹⁵ *Supra* note 1.

alternative to fossil fuels.¹⁶ These jobs are also primarily created by small firms, with 85% of firms creating fewer than 100 employees and over a quarter (28.5%) containing between 1 and 5 employees.¹⁷

Workforce Development

With large amounts of workers employed by this sector and growing support for policies that will stimulate it, it is likely many businesses will have trouble recruiting and hiring qualified workers to fill open positions. While many Americans are still unemployed and looking for work due to the pandemic, clean energy companies, like many other small businesses, often struggle to find qualified workers with the necessary skills and credentials. In many of the trades in the clean energy sector – mainly construction and technicians – firms also face a steep retirement cliff in the coming years, which could be exacerbated by significant investment in the country’s infrastructure.¹⁸ The Associated General Contractors of America found that 81 percent of firms have trouble filling positions and 72 percent of those firms anticipate labor shortages as the biggest hurdles over the next year.¹⁹

This underscores the need to continue investments in workforce development to ensure businesses can keep up with demand and policies are implemented in a timely manner. There are several different types of workforce development that are in particular interest of clean energy companies, including apprenticeships for employees seeking to transition from other industries and career and technical education for younger people seeking clean energy jobs right out of school.

Apprenticeships

Apprenticeships provide an earn-while-you-learn model for workforce development.²⁰ It combines on-the-job training with a classroom education portion to ensure employees have both the technical know-how necessary to do the job as well as the experience in implementing it.²¹ Apprenticeships are very common in the clean energy industry due to their common usage among the construction, electrical, and manufacturing sectors.²² With established apprenticeship programs through the DOL’s registered apprenticeship program, businesses have the opportunity to choose which program is needed to train their workers and implement it based on the DOL’s standards. This can help firms both recruit and train workers if they are having trouble finding labor that is already qualified to work on projects.

¹⁶ *Id.*

¹⁷ THE SOLAR FOUND., *National Solar Jobs Census* (2019).

¹⁸ Sokas, Dong, and Cain, *Building a Sustainable Construction Workforce*, INT. J. ENVIRON. RES. PUBLIC HEALTH, Nov. 2019.

¹⁹ Propeller Aero, *How to Adapt to the Skilled Labor Shortage in Construction*, Jan. 27, 2021.

²⁰ Benjamin Collins, CONG. RESEARCH SERV., R45171, *Registered Apprenticeship: Federal Role and Recent Federal Efforts* (2021) <https://crsreports.congress.gov/product/pdf/R/R45171>

²¹ *Id.*

²² *Id.*

Career and Technical Education

Career and Technical Education (CTE) is known for training younger people at the secondary and post-secondary education level.²³ CTE was established through the Carl D. Perkins Career and Technical Education Act of 2006 and aims to improve academic outcomes and preparedness for higher education or the labor market among students enrolled in the program.²⁴ While this program works through formula grants to the states to develop these programs, states that seek to ramp up clean energy production and implementation to comply with federal policies may elect to establish clean energy CTE programs to ensure the workforce is available for companies.

Policy Considerations

Certain policies that are being considered by the Biden Administration and Congress have the potential to significantly impact the clean energy economy. Two such policy categories are within tax credits and the clean energy standard. Both will seek to rapidly increase the capacity of the industry, whether by incentivizing innovation and business creation and the other by mandating the growth of the industry to phase out fossil fuels. These policies will impact small businesses by stimulating their creation and growth.

Tax Credits

Tax credits for the clean energy industry are the flip side of the carbon tax, meant to provide a monetary incentive to invest in the implementation of these technologies, rather than disincentivize the use of fossil fuels. While a number of different tax credits exist for renewable energy and energy efficiency, this memo will focus on certain proposed items by the Biden Administration and the 117th Congress. For instance, tax credits for the wind and solar industries have often been short term, leading some to expire or be temporarily extended several times. The American Jobs Plan seeks to permanently extend many of these credits, allowing for long-term predictability and investment in these projects.²⁵

The GREEN Act (H.R. 848) would require the Secretary of Treasury to report to Congress on job creation and wages associated with the expansion of the advanced energy manufacturing project credit and include a direct pay option so that businesses with low tax liability could elect to receive the credit as a tax refund.²⁶ It would also increase the credit amounts for projects that meet prevailing wage requirements. Moreover, the Senate Finance Committee approved Senator Wyden's Clean Energy for America Act on May 26, 2021, which seeks to consolidate clean energy tax credits and phase out existing subsidies for the fossil fuel industry.²⁷ It also contains provisions

²³ Boris Granovskiy, CONG. RESEARCH SERV., R45446, *Reauthorization of the Perkins Act in the 115th Congress: The Strengthening Career and Technical Education for the 21st Century Act*, Dec. 2018.

<https://crsreports.congress.gov/product/pdf/R/R45446>

²⁴ *Id.*

²⁵ THE WHITE HOUSE, *FACT SHEET: The American Jobs Plan*, March 31, 2021.

²⁶ H.R. 848, *The Growing Renewable Energy and Efficiency Now Act of 2021*.

²⁷ JOINT COMMITTEE ON TAXATION, *Technical Explanations of the Clean Energy for America Act, As Voted on by the Senate Committee on Finance on May 26, 2021*, June 17, 2021.

to ensure that the jobs created by the clean energy industry are good paying jobs by tying the credits to federal labor requirements, including payment of the prevailing wage.²⁸

One of the biggest hurdles for small firms in clean energy is the uncertainty of the survival of tax credits. Since they are short term, they risk expiration without congressional action, leading small firms set up around these policies to face uncertainty. By expanding and extending these programs, businesses will be able to predict their long-term growth and sustainability.

Clean Energy Standards

A clean energy standard (CES) is a policy that requires a minimum share of electricity to be generated by eligible clean sources. While no universal definition of clean energy exists, proposals often focus on renewable energy such as wind, solar, and hydroelectric or low emission sources like nuclear, natural gas, or carbon capture and sequestration equipped fossil fuel sources. As of February 2021, 60.3 percent of U.S. utility-scale electricity is generated by fossil fuels, including coal (19.3%), natural gas (40.3%), and petroleum (0.4%), 19.7 percent is generated by nuclear, and 19.8 percent by renewable sources such as wind (8.4%), hydroelectric (7.3%), and solar (2.3%).²⁹ In April, President Biden announced a new target for emissions reduction of 50-52 percent from 2005 levels by 2030, and net-zero carbon emissions by 2050. Within this plan is the goal of 100 percent carbon pollution free electricity by 2035.³⁰

Requiring a certain level of clean energy will likely stimulate many of the firms in the clean energy economy, which will now face an even higher demand for the work they do. This increased investment will lead to more contracts and job creation across the country. With the opportunity it presents, it will likely lead to more business creation as well, not only in jobs directly generating that energy, but companies making that energy usage more efficient, and the companies that are benefitting from lower energy costs.

Conclusion

The clean energy economy is a rapidly growing industry that employs over three million people across the country. This industry is dominated by small firms that employ local workers with high-paying jobs. The growth of the industry is an opportunity to create jobs for workers, cheaper energy for consumers, and rapidly phase out carbon emitting fossil fuels. While policy proposals in Congress and the American Jobs Plan seek to bolster the industry, this could create workforce shortfalls. To fully utilize this industry and phase out fossil fuels, Congress will not only need to consider policy that incentivizes clean energy investment in disincentivizing fossil fuels but invest in workforce training to ensure it is properly implemented.

²⁸ *Id.*

²⁹ *Supra* note 6.

³⁰ THE WHITE HOUSE, *FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies*, April 22, 2021.