COMMITTEE ON
ENERGY & COMMERCE
CHAIRMAN FRANK PALLONE, JR.

MEMORANDUM

September 11, 2020

To: Subcommittee on Environment and Climate Change Members and Staff

Fr: Committee on Energy and Commerce Staff

Re: Hearing on "Building a 100 Percent Clean Economy: Opportunities for an Equitable, Low-Carbon Recovery"

On **Wednesday, September 16, 2020, at 10 a.m. (EDT) via Cisco Webex online video conferencing**, the Subcommittee on Environment and Climate Change will hold a hearing entitled, "Building a 100 Percent Clean Economy: Opportunities for an Equitable, Low-Carbon Recovery." The hearing will focus on the importance of enabling an economic recovery that benefits all Americans and places the United States on the path to a low-carbon future.

I. BACKGROUND

The coronavirus disease of 2019 (COVID-19) has upended the U.S. economy. The most recent estimate by the Bureau of Labor Statistics reports unemployment at 8.4 percent in September 2020 – more than double what it was just in February.[1] An estimated 3.4 million people permanently lost jobs in August 2020, over two million more than in August 2019.[2] Less than half of the 22 million jobs lost during the pandemic have been recovered.[3]

The U.S. energy sector has been hit particularly hard by the pandemic.[4] The U.S. has lost more than 511,000 clean energy jobs since March, marking a 15 percent decline below pre-pandemic employment levels. These losses have been spread across the United States, with the highest job loss rates in Georgia, Kentucky, Hawaii, Louisiana, and Alaska. At the current job

[1] U.S. Bureau of Labor Statistics, *Employment Situation Summary – August 2020* (Sept. 4, 2020) (bls.gov/news.release/empsit.nr0.htm).

[2] *Id.* at Table A-11.

[3] U.S. Bureau of Labor Statistics, *Employment, Hours, and Earnings from the Current Employment Statistics Survey* (Sept. 4, 2020) (data.bls.gov/timeseries/CES0000000001).

[4] BW Research Partnership, *US Energy Employment Initial Impacts from the COVID-19 Economic Crisis, July 2020* (Aug. 2020) (bwresearch.com/covid/docs/BWResearch_EnergyJobsCOVID-19Memo_July2020.pdf).

recovery rate, it would take almost 15 years to recover the clean energy jobs lost during the pandemic.[5]

The oil, gas, and coal industries have cumulatively lost at least 118,000 jobs since March, representing a 15.5 percent decline in employment below pre-pandemic employment levels. These losses have been concentrated in states that rely on fossil fuel production, with the highest job loss rates in Kentucky, Pennsylvania, Louisiana, New Mexico, and North Dakota.[6]

II. THE NEED FOR A CLEAN, EQUITABLE, AND JOBS-FOCUSED ECONOMIC RECOVERY

In addition to causing widespread economic disruption, the pandemic has shed new light on systemic inequities. With respect to both health and employment impacts, communities of color have been disproportionately affected by the pandemic. Black, Hispanic, and Native Americans are more than twice as likely to contract COVID-19 and at least four times as likely to be hospitalized due to COVID-19 than White Americans.[7] Meanwhile, unemployment among Black and Hispanic workers remains significantly higher than among White workers. Black Americans, in particular, have struggled to regain jobs lost during the pandemic.[8]

Federal efforts to support an economic recovery present an opportunity to address longstanding racial disparities while accelerating the transition to a low-carbon economy. Targeted investments can ensure that this transition benefits workers and frontline communities, while delivering a cleaner, more sustainable environment for all Americans.

A. Economic and Climate Benefits of a Clean Recovery

Research confirms that the most effective fiscal recovery measures also offer the greatest climate benefits. Leading economic experts recently identified five specific areas of investment that simultaneously produce the highest financial returns and most positive climate impacts: 1) "clean physical infrastructure" (i.e., clean energy, energy storage, grid modernization, and

[5] BW Research Partnership, *Clean Energy Employment Initial Impacts from the COVID-19 Economic Crisis, July 2020* (Aug. 2020) (bwresearch.com/covid/docs/BWResearch_CleanEnergyJobsCOVID-19Memo_July2020.pdf).

[6] BW Research Partnership, *Fossil Fuel Employment Initial Impacts from the COVID-19 Economic Crisis, March-July 2020* (Aug. 2020) (bwresearch.com/covid/docs/BWResearch_FossilFuelsJobsCOVID-19Memo_Mar-Jul2020.pdf).

[7] U.S. Centers for Disease Control and Prevention, *COVID-19 Hospitalization and Death by Race/Ethnicity* (Aug. 18, 2020) (cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html).

[8] *See* note 1.

carbon capture); 2) building energy efficiency retrofits; 3) workforce development; 4) ecosystem resilience and regeneration; and 5) research and development for low-carbon technologies.[9]

The potential economic costs of climate change are well-documented. According to the Fourth National Climate Assessment, climate inaction could cut U.S. Gross Domestic Product (GDP) by more than ten percent by 2100.[10] Earlier this month, the Commodity Futures Trading Commission further warned that climate change poses major risks to the U.S. financial system, including "its ability to sustain the American economy" and to "generate employment, income, and opportunity."[11] Scientists agree that countries must cut emissions to net-zero by 2050, to avoid the most costly climate change impacts.[12]

Near-term efforts to reduce emissions can mitigate these risks and create a more prosperous future. In fact, states have proven that economic growth and climate action go hand-in-hand. Since 2005, states with bold climate polices have seen substantial economic gains.[13] Focusing federal economic recovery efforts on investments in low-carbon technologies and infrastructure could provide near-term economic relief and get Americans back to work quickly, while yielding long-term climate benefits.[14]

B. Prioritizing Equity in a Clean Recovery

Climate change, environmental injustice, and racial inequity are inextricably linked. Historically, sources of pollution have been clustered near low-income communities and communities of color.[15] These communities are disproportionately affected by the health effects of air pollution and climate change.[16] Such disparities have become even more evident in recent

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[9] Cameron Hepburn, et al., *Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?*, Oxford Review of Economic Policy (May 8, 2020).

[10] U.S. Global Change Research Program, *Fourth National Climate Assessment* (Nov. 2018). *See also* International Monetary Fund, *Long-Term Macroeconomic Effects of Climate Change: A Cross-Country Analysis* (Oct. 11, 2019).

[11] Commodity Futures Trading Commission, *Managing Climate Risk in the U.S. Financial System* (Sept. 9, 2020).

[12] IPCC, *Special Report on Global Warming of 1.5°C* (Oct. 2018).

[13] World Resources Institute, *America's New Climate Economy: A Comprehensive Guide to the Economic Benefits of Climate Policy in the United States* (Jul. 2020).

[14] *See*, e.g., note 13; E2 and E4TheFuture, *Build Back Better, Faster* (Jul. 2020); Rocky Mountain Institute, *US Stimulus Strategy: Recommendations for a Zero-Carbon Economic Recovery* (Jun. 2020); C2ES, *Restoring the Economy with Climate Solutions: Recommendations to Congress* (May 2020); and Third Way, *Building Back Better: Investing in Clean Infrastructure to Drive Economic Recovery* (May 7, 2020).

[15] American Lung Association, *State of the Air 2020* (Apr. 21, 2020).

[16] U.S. Global Change Research Program, *Fourth National Climate Assessment (Chapter 14: Human Health)* (Nov. 2018).

months; early research suggests that communities of color are more likely to become ill or die from COVID-19, as a result of increased exposure to poor air quality.[17] Rising temperatures are expected to exacerbate the disproportionate health impacts of pollution on low-income communities and communities of color that already exist.[18]

However, a clean and equitable economic recovery can address these inequities while creating new opportunities for frontline communities. Research highlights the direct ties between community health, economic prosperity, and other social benefits.[19] The Environmental Protection Agency's Brownfields program, for instance, has proven that federal investment in cleaning up and redeveloping polluted sites creates economic opportunity. The Brownfields program leverages $17.45 for every federal dollar invested and creates nine jobs per $100,000 spent.[20]

Additional federal support for environmental justice communities can further improve public health, economic prosperity, and air and water quality, while reducing climate risk. By one estimate, targeted public investment in environmental justice programs can create more than 300,000 jobs within five years, while reducing exposure to air, water, and climate pollution in frontline communities.[21]

C. Creating and Sustaining Jobs in a Clean Recovery

Before the pandemic, the clean energy sector employed nearly 3.4 million Americans.[22] Falling costs for low- and zero-carbon technologies – coupled with a proliferation of state, local, and nongovernmental commitments to climate action – had created significant momentum in the sector. By the end of 2019, clean energy employment was growing 70 percent faster than U.S. employment overall, and clean energy jobs outnumbered fossil fuel jobs by three-to-one.[23]

Recovery efforts that target clean energy can revive and accelerate this growth trajectory. History shows that investments in clean energy can provide both short- and long-term employment benefits. In 2009, the American Recovery and Reinvestment Act invested $90 billion in clean energy-related programs that supported roughly 900,000 jobs from 2009 to

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[17] Xiao Wu, et al., *Exposure to air pollution and COVID-19 mortality in the United States: A nationwide cross-sectional study*, Harvard University (Apr. 24, 2020).

[18] *See* note 15.

[19] McKinsey Global Institute, *Prioritizing Health: A Prescription for Prosperity* (Jul. 2020).

[20] U.S. Environmental Protection Agency, *Brownfields Program Environmental and Economic Benefits* (Nov. 15, 2019) (epa.gov/brownfields/brownfields-program-environmental-and-economic-benefits).

[21] The Rhodium Group, *A Just Green Recovery* (Jun. 29, 2020).

[22] E2, *Clean Jobs America 2020: Repowering America's Economy in the Wake of COVID-19* (Apr. 2020).

[23] *Id.*

2015.[24] Over that period, clean energy investments spurred a 30-fold increase in solar electricity generation and a tripling of wind electricity generation. Costs for utility-scale solar installations fell almost 60 percent, while electric vehicle battery costs dropped by 70 percent. As a result, clean energy employment grew 10.4 percent between 2015 and 2019, accounting for more than 40 percent of the U.S. energy workforce prior to the pandemic.[25]

An economic recovery focused on deploying low- and zero-carbon technologies and infrastructure would revitalize American manufacturing and create new, high-quality jobs.[26] By one estimate, every $1 million invested in clean energy or energy efficiency generates between seven and eight full-time jobs. In contrast, the same investment in fossil fuels generates two to three full-time jobs.[27]

Various proposals have quantified the employment impacts of a clean economic recovery:

- E2 and E4TheFuture found that investing $99.2 billion in energy efficiency, grid modernization, and renewable energy would create 860,300 jobs, generating $66 billion in GDP each year for the next five years;[28]
- The American Council for an Energy-Efficiency Economy (ACEEE) found that investing $83.5 billion in energy efficiency would create 660,000 job-years through 2023 and generate $120 billion in energy bill savings;[29]
- The World Resources Institute found that investing $12 billion and $16 billion in grid modernization annually through 2030 would create 150,000 to 200,000 full-time jobs each year, generating $30 billion to $40 billion in annual economic activity;[30]
- The BlueGreen Alliance found that investing $2.25 trillion in clean infrastructure would support or create an additional 14.5 million job-years and add $1.66 trillion to U.S. GDP over ten years;[31] and

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[24] The White House, *A Retrospective Assessment of Clean Energy Investments in the Recovery Act* (Feb. 2016) (obamawhitehouse.archives.gov/sites/default/files/page/files/20160225_cea_final_clean_energy_report.pdf).

[25] *See* note 22.

[26] BlueGreen Alliance, *Manufacturing Agenda: A National Blueprint for Clean Technology Manufacturing Leadership and Industrial Transformation* (Jun. 2020).

[27] *See* note 13.

[28] E2 and E4TheFuture, *Build Back Better, Faster* (Jul. 2020).

[29] ACEEE, *Growing a Greener Economy: Job and Climate Impacts from Energy Efficiency Investments* (Sept. 2020).

[30] World Resources Institute, *Grid Modernization: Creating Jobs, Cutting Electric Bills, and Improving Resiliency* (Apr. 2020).

[31] BlueGreen Alliance, *Making the Grade 2.0* (Sept. 2017).

- The University of Massachusetts Amherst found that investing $320 billion per year in clean energy and agriculture programs and $260 billion per year in infrastructure improvements could create 9.1 million jobs annually for ten years.[32]

The U.S. is already undergoing a market-driven energy transition, albeit not at the pace needed to reduce emissions to net-zero by 2050. The current economic crisis has added to the challenges that communities in transition already face. These communities would benefit from an economic recovery that invests in capacity-building, workforce development, and infrastructure. These measures would help workers return to jobs in cleaner industries, creating economic opportunity for communities in transition.[33]

III. WITNESSES

The following witnesses have been invited to testify:

Lonnie R. Stephenson
International President
International Brotherhood of Electrical Workers (IBEW)

Devashree Saha, Ph.D.
Senior Associate
World Resources Institute

Denise Fairchild, Ph.D.
President & Chief Executive Officer
Emerald Cities Collaborative

Michelle Michot Foss, Ph.D.
Fellow in Energy & Minerals
Baker Institute for Public Policy, Center for Energy Studies
Rice University

[32] Political Economy Research Institute at the University of Massachusetts Amherst, *Job Creation Estimates Through Proposed Economic Stimulus Measures* (May 21, 2020).

[33] Just Transition Fund, *National Economic Transition Platform* (Jun. 2020).