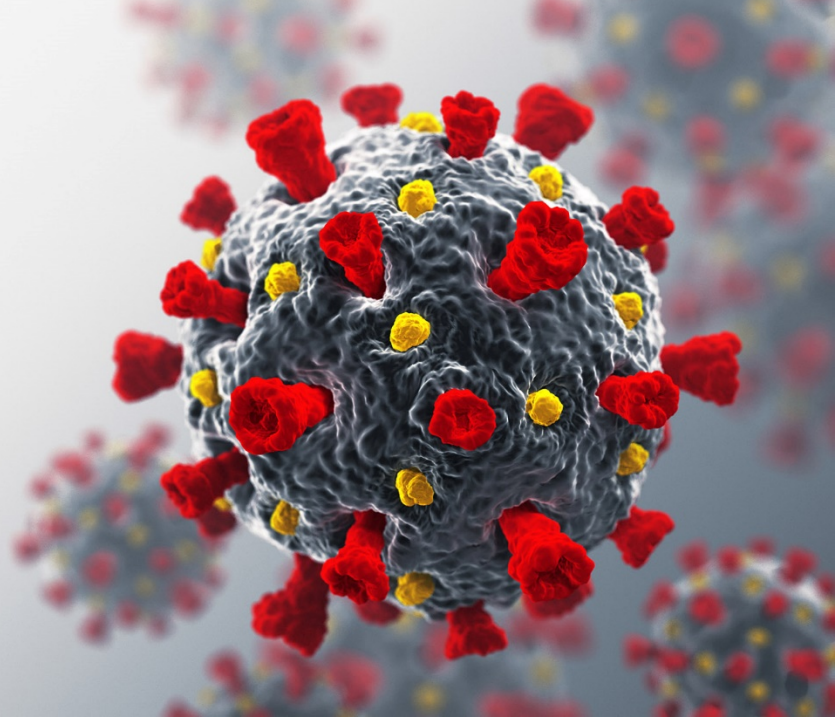


To: Clients
From: Philip Jordan
Vice-President, BW Research Partnership
Date: April 14, 2020

MEMORANDUM

Clean Energy Employment Initial Impacts from the COVID-19 Economic Crisis, March 2020



INTRODUCTION

Over the month of March, the COVID-19 pandemic fueled historic job losses in the United States. In the last week of March, weekly initial unemployment claims reached a record high of 6.87 million, more than doubling the previous record set only a week earlier. Total initial claims for March reached about 10.6 million. For context, the record number of weekly initial claims filings before 2020 was just under 700,000, during the midst of the Great Recession.

The claims data show that workers in industries like food services and hospitality were hit first and hardest. Clean energy workers were also significantly impacted, as the industry **shed an estimated 106,400 jobs in March**. This represents a 3 percent drop in employment, more than erasing industry-wide growth for clean energy for the entire year prior. Unfortunately, this only captures the initial impacts of the COVID-19 crisis and does not include many temporarily furloughed or underemployed workers; job losses in clean energy will continue to grow into the coming months.

IMPACTS

While the clean energy industry faced a significant initial drop in March, it appears that the situation is likely to get much worse. Across the economy, the bulk of the initial unemployment claims were filed by leisure and hospitality workers (nearly 65% of all claims filed in the latter half of March), who were most immediately impacted as non-essential retail and food, beverage, and lodging establishments were closed. Near the end of March, many states expanded their stay-at-home orders and also shut down all on-premises work for non-essential clean energy projects. Clean energy related manufacturing plants that produce everything from electric vehicles and batteries to ENERGY STAR® appliances, building materials, high-efficiency lighting equipment and solar panels and wind turbine parts also were closed to prevent the spread of COVID-19. As a result, clean energy companies began expanding furloughs and layoffs, which will undoubtedly swell unemployment filings among clean energy workers beginning with the April unemployment claims reports.

Several recent analyses suggest that the 10 million unemployment claims economy-wide do not represent the entirety of job losses, as many workers who are furloughed temporarily are not seeking other employment and therefore do not qualify for benefits. The data also do not include workers who

had their hours slashed and are now significantly underemployed. The Federal Reserve Bank of St. Louis estimates that job losses may exceed 52 million by the end of the second quarter of 2020.¹

Based on that analysis, along with forecasts from clean energy trade groups and reports from individual companies, we can project that the clean energy sector has or will lose more than a half million jobs – or 15 percent of its total workforce – in the months ahead if no additional actions are taken to support the industries.

The March unemployment data shows every clean energy sector is being impacted by the economic crisis.

- Energy efficiency, the largest clean energy sector, had the most job losses in March, shedding about 69,800 jobs or almost 3 percent. This represents two-thirds of all clean energy job losses over the past month.
- Renewable electric power generation and alternative transportation were also hard hit, losing more than 16,500 and 12,300 jobs respectively. Alternative transportation had the highest percent job loss of each of the five sectors, at more than 4.5 percent.
- Clean fuels and clean transmission, distribution, and storage dropped about 3 percent of their workforce, representing 3,400 and 4,300 jobs, respectively.

These estimates are all quite conservative and do not reflect underemployment or temporary unemployment – which would result in more than 250,000 unemployed or underemployed in energy efficiency; 60,000-75,000 in renewable energy and close to 50,000 in alternative vehicles, just in March. All segments are likely to show even greater losses through April.

California had the largest number of layoffs, losing 19,900 jobs or more than 3.5 percent of its clean energy workforce to this initial employment drop. Michigan, Massachusetts, North Carolina, and Pennsylvania have all lost more than 5,000 clean energy jobs each, all of which are the most conservative estimates of job losses. Hawaii, Pennsylvania, North Carolina, and Rhode Island saw the largest declines in terms of percent of their respective clean energy sectors, all with around 6 percent employment drops over the past month. States that have fared better than average so far include South Dakota, West Virginia, Colorado, Utah, Florida, and Georgia, all falling between about 1 percent to 1.5 percent. For more information about clean energy job losses by each state, see Appendix A.

The COVID-19 economic crisis is disproportionately impacting communities that are least able to cope. Initial studies have shown that low income workers, younger workers, women, and racial and ethnic

¹ <https://www.stlouisfed.org/on-the-economy/2020/march/back-envelope-estimates-next-quarters-unemployment-rate>.

minorities across the US have already been heavily impacted by the fallout from the pandemic, and will likely see above average job loss rates going forward.² Based on our analysis of the data, Hispanic and Latino workers have been hit the hardest to date. The clean energy industry is about 14 percent Hispanic/Latino, but they represent an estimated 24% of clean energy job losses in March.

METHODOLOGY

Employment change by industry from February to March 2020 allows us to see differences in initial COVID-19 related employment impacts between industries. The Bureau of Labor Statistics provides this data in Table B-1 “Employees on nonfarm payrolls by industry sector and selected industry detail,” from its Employment Situation news release. Since this data is based on surveys conducted in the second week of March, it does not capture accurate total job losses for the whole month. For that information, we look to the Department of Labor’s Unemployment Insurance Weekly Claims data. By totaling initial claims for all weeks in March, we get a better picture of how many Americans are jobless. While this is not a perfect count, it allows for a more accurate, up-to-date estimate and illustrates the difference in impacts among states.

Industry employment change premiums are created by taking the percent change in employment of each industry over the national percent change in employment, then subtracting 1. State employment change premiums are made the same way. These state and industry premiums are combined evenly and applied to the national percent change in employment. These final industry-state job loss rates are applied to the industry breakdown within each clean energy sector (renewable electric power generation, clean fuels, clean transmission, distribution, and storage, energy efficiency, and alternative transportation) for each state to give us our final clean energy employment loss estimates. Clean energy employment data broken out by sector, industry, and state is derived from the 2020 US Energy and Employment Report. For more information on the 2020 USEER methodology, please visit usenergyjobs.org.

Clean energy is categorized into the five previously listed sectors: renewable electric power generation, clean fuels, clean transmission, distribution, and storage, energy efficiency, and alternative transportation. Renewable electric power generation includes technologies like solar, wind, hydro, and geothermal and bioenergy/biomass. Clean fuels include biomass and other biofuels. Clean transmission, distribution, and storage includes battery and other clean storage technologies, microgrids, smart grid, and other grid modernization. Energy efficiency includes efficient lighting, high efficiency HVAC and other renewable heating and cooling, and ENERGY STAR® products and appliances. Alternative transportation includes hybrid, electric, and other alternative fuel vehicles. This clean energy definition is used by organizations like E2, E4TheFuture, Clean Energy Trust, US Climate Alliance, and many state energy organizations.

ABOUT BW RESEARCH

BW Research is a full-service applied research firm that is focused on supporting our clients with economic & workforce research, customer & community research, as well as strategic planning and evaluation services. For more information and analysis on economic impacts related to COVID-19, please visit: <http://bwresearch.com/covid>.

² <https://www.brookings.edu/research/who-are-the-workers-already-impacted-by-the-covid-19-recession/>

APPENDIX A: STATE CLEAN ENERGY JOB LOSSES IN MARCH 2020

State	Total CE Jobs Lost	Percent Decline	State	Total CE Jobs Lost	Percent Decline
Alabama	965	2.1%	Montana	440	4.0%
Alaska	219	3.6%	Nebraska	619	2.8%
Arizona	1,050	1.7%	Nevada	784	2.3%
Arkansas	404	1.9%	New Hampshire	354	2.1%
California	19,949	3.6%	New Jersey	2,345	4.1%
Colorado	1,080	1.6%	New Mexico	518	4.1%
Connecticut	755	1.8%	New York	4,789	2.9%
Delaware	484	3.4%	North Carolina	6,800	5.9%
District of Columbia	734	4.7%	North Dakota	223	2.2%
Florida	2,673	1.6%	Ohio	4,719	4.1%
Georgia	1,332	1.5%	Oklahoma	500	2.1%
Hawaii	961	6.4%	Oregon	1,324	2.2%
Idaho	475	3.4%	Pennsylvania	6,068	6.2%
Illinois	3,326	2.6%	Rhode Island	925	5.6%
Indiana	2,592	2.9%	South Carolina	963	1.7%
Iowa	1,066	2.9%	South Dakota	111	0.9%
Kansas	802	3.0%	Tennessee	1,492	1.7%
Kentucky	1,505	3.8%	Texas	4,246	1.7%
Louisiana	1,463	4.6%	Utah	723	1.6%
Maine	554	4.0%	Vermont	547	3.0%
Maryland	1,954	2.3%	Virginia	2,044	2.1%
Massachusetts	5,611	4.4%	Washington	3,940	4.4%
Michigan	5,446	4.1%	West Virginia	138	1.3%
Minnesota	2,415	3.7%	Wisconsin	2,031	2.6%
Mississippi	369	1.7%	Wyoming	184	2.1%
Missouri	1,462	2.5%	US TOTAL	106,472	3.1%