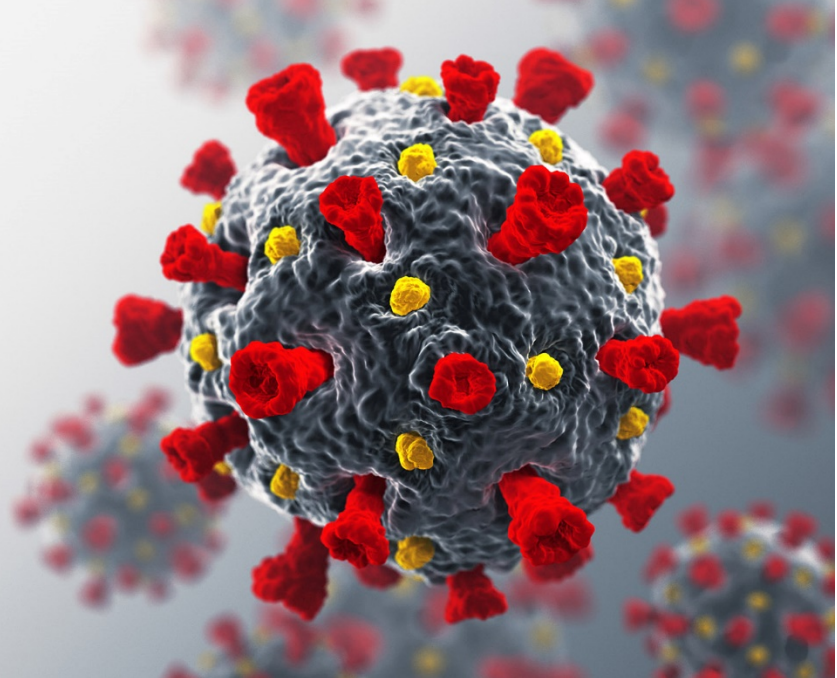


To: Clients
From: Philip Jordan
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Date: April 21, 2020

MEMORANDUM

US 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 approximately 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.

At the same time, oil markets continued a decline that started with an early 2020 demand drop, followed by disagreements over production cuts among OPEC+ nations. Oil prices fell by more than one-third globally, in a move many suspect was orchestrated to put pressure on U.S. shale producers, who have been expanding market share dramatically over the past decade. COVID-19 related reductions to economic activity have further exacerbated oil's price decline, and it remains to be seen whether the recently announced global production cut agreement (of nearly 10 million barrels per day) will stabilize prices and stave off further turmoil in U.S. oil production.¹

March's historic unemployment claims filings seem to be only the beginning, and workers in industries like food services and hospitality were hit first and hardest. Energy-related workers – defined in the U.S. Energy and Employment Report² (an effort led by the National Association of State Energy Officials, the Energy Futures Initiative, and BW Research Partnership) as those working in electricity generation, fuels, transmission, distribution, storage, energy efficiency, and motor vehicles – were also significantly impacted, as the industry **shed an estimated 303,500 jobs in March**. This represents a 3.6 percent drop in employment, eliminating more than the industry-wide growth over the past two years.

Of those 303,500 lost energy jobs,

- 123,100 or about 4 in 10 belonged in traditional energy, defined as fuels, electricity generation, and transmission, distribution, and storage
- Energy efficiency represented 69,800 lost jobs or 23 percent of all lost energy jobs

¹ <https://foreignpolicy.com/2020/03/14/oil-price-war-russia-saudi-arabia-no-end-production/>

² <http://usenergyjobs.org>

- Motor vehicles lost 110,600 jobs or 36 percent of all energy job losses

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 the energy industry will continue to grow into the coming months.

IMPACTS

While the energy industry faced a significant initial drop in March, it appears that the situation is likely to get much worse. Demand for energy has fallen sharply and petroleum and other fuel storage is near capacity, as Americans stay home and out of their cars, and factories close due to physical isolation and decreased demand.³ As a result, energy companies began expanding furloughs and layoffs, which will undoubtedly swell unemployment filings among 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 2020.⁴

Based on that analysis, we can project that the energy sector is at risk to lose 1.5 million jobs in the months ahead if no additional actions are taken to support the underlying industries.

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

- Motor vehicles, the largest energy industry, suffered the most job losses in March, shedding about 110,600 jobs or more than 4 percent. This accounts for 36 percent of energy-related jobs lost over the past month.
- Fuels suffered the most job losses as a percent of its workforce, dropping more than 6 percent or about 72,700 jobs, or almost one quarter of all energy job losses in March. However, the steep drop is not limited to just the COVID-19 pandemic; tanking oil markets in the first quarter of 2020 also heavily impacted the US fuels sector.

³ <https://www.cfr.org/blog/oil-ground-zero-running-out-storage>; <https://www.eia.gov/outlooks/steo/>

⁴ <https://www.stlouisfed.org/on-the-economy/2020/march/back-envelope-estimates-next-quarters-unemployment-rate>.

- Energy efficiency, the second largest energy-related sector, followed closely behind fuels, losing about 69,800 jobs or about 3 percent of its workforce. This represents 23 percent of energy job losses over the past month.
- Transmission, distribution, and storage and electric power generation were also hard hit, losing more than 26,400 and 23,900 jobs respectively. This represents a 2 and almost 3 percent decrease for the respective sectors, each contributing between 8 and 9 percent of all energy industry job losses.
- Clean energy jobs make up more than one third of energy job losses, totaling 106,400 jobs lost.
- Fossil and nuclear fuels and electricity generation, traditional transmission and distribution, and gas and diesel motor vehicles make up about 197,000 lost jobs or nearly two thirds of all energy job losses.
- Fossil and nuclear fuels and electricity generation account for 76,700 job losses or more than one quarter of all energy jobs lost.
- Of the nearly 51,000 jobs lost in oil and gas drilling and refineries, oil and gas field workers account for 49,500 lost jobs while about 1,500 jobs were lost in refineries. This does not include the oil and gas job losses in other activities like mining machinery manufacturing and pipeline distribution.

These estimates are all quite conservative and do not reflect underemployment or temporary unemployment and all segments are likely to show even greater losses through April.

California had the largest number of layoffs, losing 40,700 jobs or more than 4 percent of its energy workforce to this initial employment drop. Texas followed close behind, losing more than 30,100 jobs or 3 percent of its energy industry employment. Pennsylvania lost 22,000 energy jobs while Michigan, Ohio, North Carolina, and Louisiana have all lost more than 12,800 energy jobs each, all of which are the most conservative estimates of job losses. New Mexico, Pennsylvania, Louisiana, Alaska, and Hawaii saw the largest declines in terms of percent of their respective energy sectors, all with between 7 and 9 percent energy employment drops over the past month. States that have fared better than average so far include South Dakota, Georgia, Arizona, and Mississippi, all falling less than 2 percent. For more information about energy job losses by state, see [Appendix A: State Energy Job Losses](#).

Of the 123,100 job losses in the traditional energy sector, Texas suffered the hardest, losing about 22,200 jobs or about 74 percent of their total energy job losses. This represents a nearly 4 percent drop in employment. Following Texas, California lost 15,300 traditional energy jobs and Louisiana lost 10,300. These losses account for 37 and 80 percent of the respective states' energy workforce. States that were hit hard as a percent drop in traditional energy employment are New Mexico, Pennsylvania, Alaska, and Louisiana, all dropping between 8 and 10 percent. For Rhode Island, Delaware, Connecticut, and Maryland, traditional energy job losses made up less than 18 percent of their total energy job losses.

Intuitively, the COVID-19 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

minorities across the US have undergone above average initial job loss rates.⁵ Hispanic and Latino workers were hit the hardest; the energy industry is about 14 percent Hispanic/Latino, but an estimated 23 percent of the job losses in the energy industry are Hispanic/Latino workers. All non-white racial and ethnic minorities constitute about 35 percent of the energy industry while representing more than 31 percent of job losses. Women represent 18 percent of energy job losses in March while making up about 25 percent of the energy workforce.

METHODOLOGY

Employment change by industry from February to March 2020 allows us to evaluate differences in initial COVID-19 related employment impacts between industries. The Bureau of Labor Statistics (BLS) 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 entire month. For that information, we look to the Department of Labor’s Unemployment Insurance Weekly Claims data. By summing initial claims for all weeks in March, we arrive at 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 one (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 energy sector (electric power generation, fuels, transmission, distribution, and storage, energy efficiency, and motor vehicles) for each state to produce final energy employment loss estimates. Energy employment data broken out by sector, industry, and state is derived from the 2020 US Energy and Employment Report (USEER). For more information on the 2020 USEER methodology, please visit <http://usenergyjobs.org>.

Energy is categorized into the five previously listed sectors: electric power generation, fuels, transmission, distribution, and storage, energy efficiency, and motor vehicles. Electric power generation includes detailed technologies such as solar, wind, hydro, natural gas, oil, coal, and geothermal and bioenergy/biomass. Fuels include natural gas, oil, coal, biomass and other biofuels. Transmission, distribution, and storage includes fuel storage, battery and other clean storage technologies, traditional transmission and distribution of electricity, natural gas, oil, and coal, microgrids, smart grid, and other grid modernization. Energy efficiency includes efficient lighting, traditional and high efficiency HVAC and other renewable heating and cooling, and ENERGY STAR® products and appliances. Motor vehicles includes gas and diesel vehicles, hybrid, electric, and other alternative fuel vehicles. For a more detailed explanation of the five energy sectors, please visit <http://usenergyjobs.org>.

⁵ <https://www.brookings.edu/research/who-are-the-workers-already-impacted-by-the-covid-19-recession/>

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>.

APPENDIX A: STATE ENERGY JOB LOSSES IN MARCH 2020

State	Energy Jobs Lost	Percent Decline	State	Energy Jobs Lost	Percent Decline
Alabama	3,189	2.1%	Montana	1,550	5.1%
Alaska	2,149	7.5%	Nebraska	1,904	3.3%
Arizona	2,156	1.7%	Nevada	1,857	3.0%
Arkansas	1,215	1.9%	New Hampshire	752	2.4%
California	40,733	4.3%	New Jersey	6,028	4.1%
Colorado	3,868	2.4%	New Mexico	5,250	9.0%
Connecticut	1,440	1.9%	New York	9,719	2.8%
Delaware	794	3.5%	North Carolina	13,692	6.3%
District of Columbia	941	4.6%	North Dakota	2,940	5.9%
Florida	6,535	1.9%	Ohio	15,492	4.4%
Georgia	3,314	1.6%	Oklahoma	6,069	4.4%
Hawaii	1,798	7.0%	Oregon	2,357	2.4%
Idaho	1,212	3.7%	Pennsylvania	22,057	8.2%
Illinois	8,687	2.8%	Rhode Island	1,555	6.5%
Indiana	8,113	2.8%	South Carolina	2,780	2.0%
Iowa	2,665	3.1%	South Dakota	252	0.9%
Kansas	2,992	3.5%	Tennessee	4,111	1.9%
Kentucky	6,639	4.4%	Texas	30,113	3.1%
Louisiana	12,853	7.6%	Utah	1,888	2.2%
Maine	1,158	4.6%	Vermont	707	3.1%
Maryland	3,423	2.6%	Virginia	4,258	2.3%
Massachusetts	9,042	4.8%	Washington	8,260	5.3%
Michigan	16,588	4.0%	West Virginia	1,778	2.7%
Minnesota	5,007	3.9%	Wisconsin	4,339	2.8%
Mississippi	1,271	1.8%	Wyoming	1,997	4.5%
Missouri	4,054	2.5%	US TOTAL	303,541	3.6%