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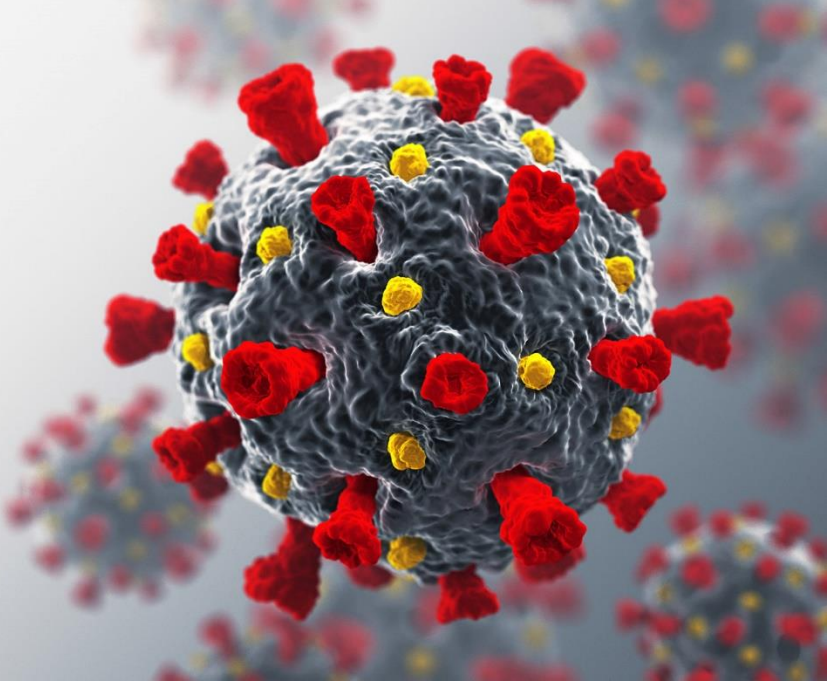

To: Clients

From: Philip Jordan
Vice-President, BW Research Partnership

Date: September 21, 2020

MEMORANDUM

Fossil Fuel Employment Initial Impacts from the COVID-19 Economic Crisis, March-August 2020

INTRODUCTION

Over the past few months, the COVID-19 pandemic has fueled historic job losses in the United States. These losses peaked in April, the first week of April nearly matched the historic weekly high with 6.62 million additional initial unemployment claims. Initial unemployment claims for April totaled 23.1 million, while the impact of the COVID-19 pandemic on the US workforce from March through May totaled about 35 million before experiencing tepid growth from June through August. The insured unemployment rate rose more than 11 percentage points from March through May, reaching 15.6 percent, which is the highest recorded rate since BLS began tracking this data in 1948.

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. COVID-19 related reductions to economic activity have further exacerbated oil's price decline, however historically large production cuts of 9.7 million barrels per day have appeared to help oil prices recover, potentially staving off further turmoil in U.S. oil production.[1]

While workers in industries like food services and hospitality were hit first and hardest, negative impacts are now being felt throughout the economy. Energy-related workers – defined in the U.S. Energy and Employment Report[2] (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 1.36 million jobs at the peak of the pandemic; this total surpasses nearly all industry-wide growth measured since the first US Energy and Employment Report five years ago.

A closer examination of fossil fuel workers finds that the industry **shed an estimated 121,100 jobs through March, April, May, June, July, and August,** representing a 16 percent drop in employment. Unfortunately, this only captures the initial impacts of the COVID-19 crisis and does not include many temporarily furloughed or underemployed workers.

[1] https://www.bloomberg.com/news/articles/2020-05-16/opec-dazzles-oil-market-with-swift-delivery-of-new-supply-cuts
[2] http://usenergyjobs.org

IMPACTS

Fossil fuels employment was on a steady decline through the first two months of the COVID-induced economic downturn, losing about 7 percent of total employment in each of March and April before briefly leveling out in May, dropping only a half percent. Despite energy job growth in June through August, fossil fuel employment continued to decrease, dropping an additional 12,500 jobs. 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 continued furloughs and layoffs, which has increased unemployment filings among fossil fuel workers.

The unemployment data shows that economic impacts have affected all fossil fuel sectors but have not been evenly distributed across industries.

- Fuels, the largest fossil fuel sector, had the most job losses through August, shedding about 115,600 jobs or 19 percent. This represents 95 percent of all fossil fuel job losses over the last six months.
- Transmission, distribution, and storage employment dropped 9 percent of their workforce through August, representing 4,700 jobs.
- Electric power generation employment, meanwhile, is mostly flat, losing about 900 jobs, or less than 1 percent of its workforce, through August. This is primarily due to the more stable employment in the utility sector.
- Oil lost the most workers of the fossil fuels, shedding 71,400 jobs or 18 percent of pre-COVID-19 employment. Most job losses were in extraction activities.
- Gas and coal employment both declined 14 percent since March – representing 37,200 jobs and 12,500 jobs, respectively.

Texas had the largest number of layoffs, losing 41,400 jobs or about 14 percent of its fossil fuel workforce to this employment drop. Louisiana lost 12,500 jobs, or 25 percent of its fossil fuel employment while Oklahoma dropped 19 percent, or 11,000 fossil jobs. Kentucky and Pennsylvania also both lost more than a quarter of their fossil fuel workforce, shedding 3,000 jobs and 9,100 jobs, respectively. For more information about fossil fuel job losses by each state, see Appendix A: State Fossil Fuel Job Losses, March-August 2020.

The BLS Employment Situation report shows us that in the overall economy, racial and ethnic minorities, women, young workers, and those with less educational attainment are currently suffering higher unemployment rates.[4] While oil, gas, and coal jobs continued to shed during June's job bump, Hispanic and Latino energy workers were hit the hardest, as 34 percent of derrick operators, rotary drill operators, and roustabouts in the US are Hispanic/Latino, compared to the energy industry as a whole being about 14 percent Hispanic/Latino.[5,6] A stimulus program built to provide job security to these displaced fossil

[3] https://www.cfr.org/blog/oil-ground-zero-running-out-storage; https://www.eia.gov/outlooks/steo/
[4] https://www.bls.gov/news.release/empsit.nr0.htm
[5] Emsi, Occupation Table with SOCs 47-5011, 47-5012, and 47-5071. Datarun 2020.2 – Employees.
[6] https://www.usenergyjobs.org

workers across the energy industry is necessary to promote a rapid and more equitable economic recovery.

METHODOLOGY

Employment change by industry monthly from February to August 2020 allows us to evaluate differences in 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 each month, 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 each month, 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 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. BLS Local Area Unemployment Statistics (LAUS) also provides monthly employment data by high level industry and state in Table 4 "Employees on nonfarm payrolls by state and selected industry sector," which is then weighted and applied to the industry-state job loss rates. 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.

The fossil fuel industry comprises three of the five previously listed sectors: electric power generation, fuels, and transmission, distribution, and storage – not including energy efficiency and motor vehicles. Electric power generation includes detailed technologies such as natural gas, oil, and coal. Fuels include natural gas, oil, and coal. Transmission, distribution, and storage includes traditional transmission and distribution of electricity, natural gas, oil, and coal. For a more detailed explanation of all five energy sectors, please visit http://usenergyjobs.org.

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 FOSSIL FUEL JOB LOSSES, MARCH-AUGUST 2020

State	Total FF Jobs Lost	Percent Decline	State	Total FF Jobs Lost	Percent Decline
Alabama	1,044	12.1%	**Montana**	909	17.9%
Alaska	2,831	25.6%	**Nebraska**	62	8.7%
Arizona	161	3.7%	**Nevada**	33	2.1%
Arkansas	445	9.9%	**New Hampshire**	4	0.9%
California	5,405	14.9%	**New Jersey**	297	6.8%
Colorado	3,775	13.2%	**New Mexico**	6,142	25.7%
Connecticut	26	1.7%	**New York**	139	2.1%
Delaware	68	6.2%	**North Carolina**	165	6.4%
District of Columbia	0	0.0%	**North Dakota**	4,869	21.7%
Florida	242	2.7%	**Ohio**	2,679	17.8%
Georgia	268	8.4%	**Oklahoma**	10,971	19.0%
Hawaii	82	16.7%	**Oregon**	23	1.7%
Idaho	19	6.0%	**Pennsylvania**	9,085	27.0%
Illinois	1,220	10.4%	**Rhode Island**	4	1.2%
Indiana	980	13.8%	**South Carolina**	62	2.4%
Iowa	55	3.7%	**South Dakota**	11	3.9%
Kansas	1,250	14.3%	**Tennessee**	130	4.0%
Kentucky	3,041	29.6%	**Texas**	41,354	14.2%
Louisiana	12,460	25.1%	**Utah**	716	9.5%
Maine	14	3.0%	**Vermont**	3	10.7%
Maryland	94	4.4%	**Virginia**	609	9.7%
Massachusetts	36	2.5%	**Washington**	468	12.2%
Michigan	926	13.3%	**West Virginia**	3,742	16.7%
Minnesota	259	6.8%	**Wisconsin**	54	2.9%
Mississippi	997	11.9%	**Wyoming**	2,790	13.9%
Missouri	99	5.4%	**US TOTAL**	**121,119**	**16.0%**