GOVERNOR'S OFFICE OF ENERGY DEVELOPMENT
Advancing Utah's Energy Future

UTAH DNR GEOLOGICAL SURVEY

COVID-19 Energy Sector Status Report

May 4, 2020

To assist Utah residents and businesses during the COVID-19 pandemic, the Governor's Office of Energy Development (OED) and the Utah Geological Survey (UGS) are partnering to compile information on the status of Utah's energy and mineral sectors.

Summary

The COVID-19 pandemic is creating unprecedented market uncertainty, disrupting supply chains, and significantly altering the overall demand for energy and materials here in Utah and abroad. After over a month of shelter-in-place orders, the energy and mining sector is facing many challenges; including declining demand for goods, resources and services, overproduction, limited financing opportunities, project postponements and cancellations, insufficient quantities of personal protective equipment (PPE) for essential personnel, consumer uncertainty, and disrupted supply chains. We are seeing the true impact of COVID-19 on the industry and are now beginning to identify the short-term energy outlook, while managing uncertain long-term projections for late 2020 and beyond.

Utah Energy and Mining Sector Overview

The petroleum industry in Utah is facing multiple challenges in maintaining production and storing petroleum products during the COVID-19 pandemic. As a result of overproduction from OPEC producers in Russia and Saudi Arabia and a significant drop in demand, Uinta Basin waxy crude (UB wax) prices have dropped over the past couple of months to as low as -$50.13/bbl[1], and West Texas Intermediate (WTI) was selling at its first-ever negative price on April 20, 2020, finishing as low as -$36.98/bbl (Table 1).[2] As a result of rapidly declining crude prices and low natural gas prices, Utah's drill rig count went from eight rigs in early April 2020 to zero rigs on May 1, 2020[3]

Market Grade	Source	2/20/2020	3/20/2020	4/20/2020	4/27/2020	% (2/20-4/27)
Brent	Market Insider	$59.31	$26.98	$25.57	$19.99	-66.30%
WTI	EIA	$53.77	$19.48	-$36.98	$12.17	-77.37%
UB Wax (Yellow)	Big West Oil	$41.28	$7.87	-$50.13	$0.28	-99.32%
Natural Gas (Henry Hub)	Market Insider	$1.92	$1.60	$1.92	$1.82	-5.21%

Table 1: Recent oil prices trends (USD ($)/bbl), with natural gas Henry Hub (USD ($)/MMBtu), 4/27/2020.

The sudden decrease in the demand for petroleum products as a result of the COVID-19 shelter-in-place orders have led to Utah's refineries reducing crude inputs and struggling to maintain production. This is supported by EIA data reporting Rocky Mountain (PADD 4) refineries dropping crude inputs by 28%, and reducing refinery utilization from 90% to 64% (Figure 1).[4]

Based on the current market conditions and data, early forecasts from UGS indicate that Utah production could decline to approximately 65,000 to 70,000 barrels per day by the fall of 2020. If the forecasts hold true, this will place Utah's crude production at approximately 28 to 30 million barrels for 2020, down from 36.5 million barrels in 2019. In an effort to further understand the impact of the COVID-19 pandemic, using existing data, UGS produced and presented a representation of Utah's oil production to the OED Oil and Gas Working Group (Figure 2). The representation draws on the similarities and differences between the 2015 crash and the 2020 crash, showing Utah production will decrease following prices, but it is currently unclear by how much, with early estimates indicating a 20% drop by fall 2020.

[1] Big West Oil LLC, Crude Oil Bulletin, April 2020
[2] EIA Petroleum & Other Liquids, Cushing OK WTI Spot Price FOB
[3] Baker Hughes, North America Rig Count, Rigs by State - Current and Historical
[4] EIA, Petroleum & Other Liquids, Rocky Mountain (PADD 4) Imports

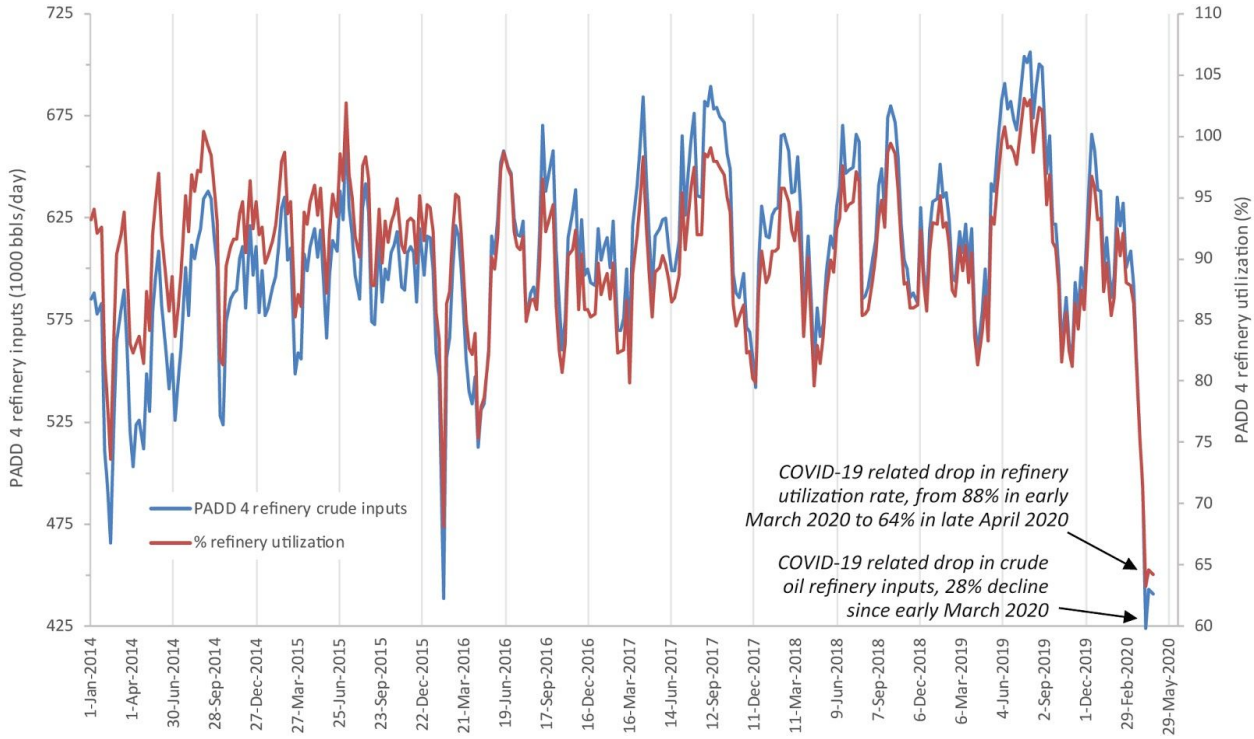

Figure 1: EIA, Rocky Mountain (PADD 4) Refinery Data.

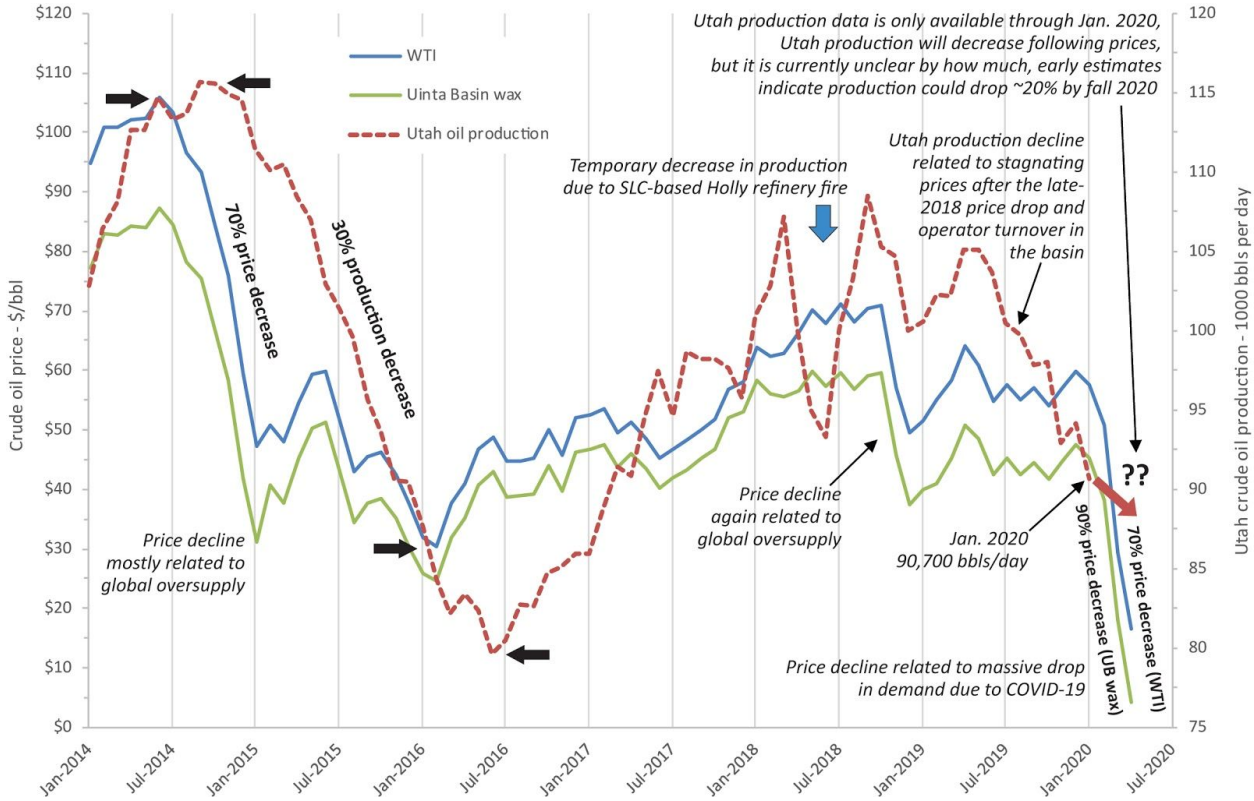

Figure 2: May 1, 2020, Utah Geological Survey's (UGS) crude oil prices and Utah oil production representation. With WTI data from EIA, UB Wax data from Big West Oil price bulletins, and production data from the Utah Division of Oil, Gas and Mining.

<u>The renewable and energy efficiency industry</u> in Utah is facing job losses and project delays due to disruptions in supply chains and consumer uncertainty. Since March 2020, Utah's renewable and energy efficiency industry suffered a 2.2% decline, losing an estimated 1,888 jobs. This is lower than the national 3.6% average decline in job growth. Nationally, an estimated 303,541 renewable and energy efficiency jobs have been lost since March 2020, with projections as high as half-million jobs to be lost over the coming months[5]. These numbers support preliminary estimates that the U.S. solar market will be down 18% in 2020.[6]

In response, OED has conducted a series of surveys through two working groups, one supporting utility-scale renewable developers, and the other supporting residential renewable energy and energy efficiency companies in Utah. Based on the survey results, job losses are being driven by project delays due to financing issues, deteriorating supply chains for essential components, including cement, gravel, and solar panels, and difficulties procuring personal protective equipment for personnel working on residential projects. The challenges in Utah are similar to the nation's with the Solar Energy Industries Association (SEIA) identifying the same issues across a similar industry-wide survey[7], and reporting 55% of the solar workforce already being laid off or suffering setbacks (Figure 3).[8]

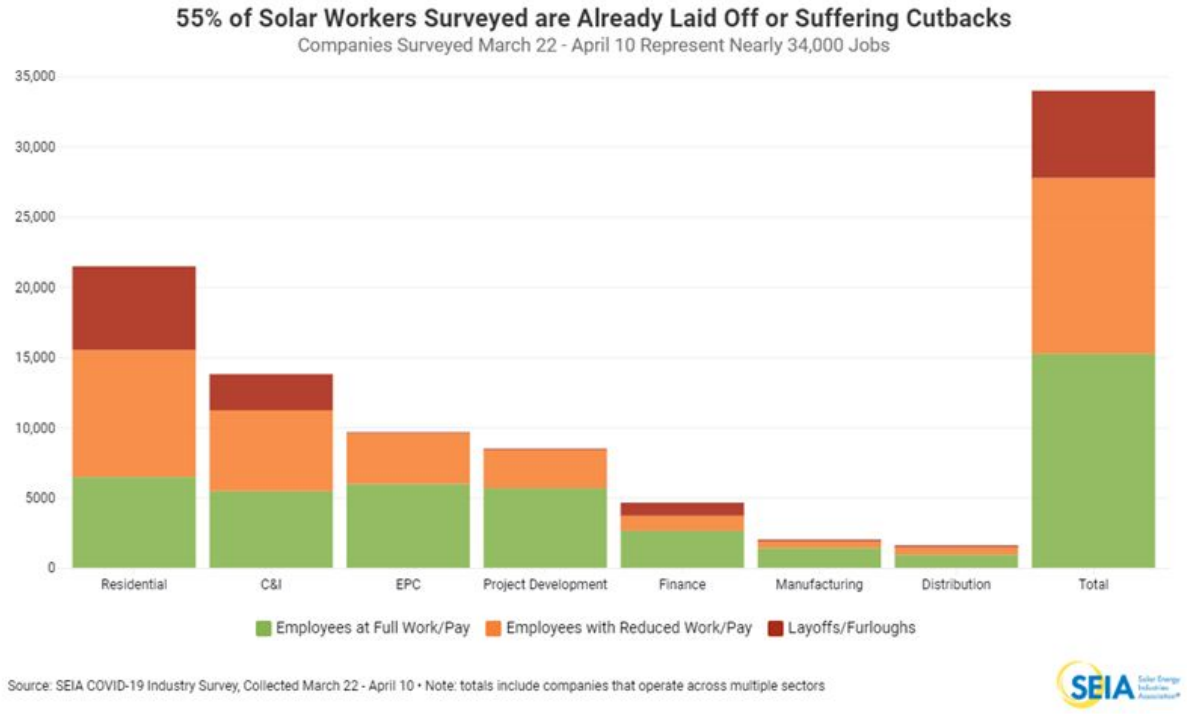

Figure 3: SEIA COVID-19 industry survey (3/22/2020-4/10/2020) results, showing workforce impacts across multiple solar sectors.

It is yet to be determined if these factors will affect Rocky Mountain Power's all-source request for proposal (RFP) (with a large demand for renewables) set to be contracted in July 2020. However, with multiple utility and residential renewable and energy efficiency projects facing delays it is a situation that will need to be monitored over the coming weeks.

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[5] BW Research Partnership, April 21, 2020
[6] COVID-19 & The U.S. Solar Industry Fact Sheet, SEIA
[7] Abigail Ross Hopper, SEIA, Survey Findings: Things are bad and getting worse, March 26, 2020
[8] SEIA, COVID-19: Resources for the Solar Industry

The utility industry in Utah continues to boast a lower average price of electricity across all sectors at $7.94/kWh in February 2020, compared to the national average at $10.29/kWh.[9] However, as a result of the COVID-19 pandemic, utilities across the nation are facing flat, falling loads, with more than nine regional power grids in North America reporting flat to declining load averages during March 2020.[10]

This trend is being driven by multiple social efforts (shelter-in-place, social distancing, etc..) being implemented by state and local governments to combat the spread of the Coronavirus. These efforts are causing residential energy use to increase, and commercial and industrial energy use to significantly decrease. Supporting this, in Utah, Dominion Energy has reported an approximately 5% decrease in demand since March 15, 2020. This reported decrease could be associated with warmer weather conditions in the spring compared to the winter. However, EIA forecasts project that industrial demand for natural gas will decrease significantly because of the weakening economic outlook, leading to a lower forecast natural gas-weighted manufacturing index that is projected to decline through September 2020.

The energy mining industry in Utah is remaining stable at the moment with Uinta Basin coal holding steady[11], and continuing to deliver on multi-year contracts with minimum order requirements to the Hunter, Huntington, and Intermountain Power Plant operations. It is reported that all plants have implemented additional operational measures to minimize potential impacts from the pandemic. However, on the national level, the industry is facing a coal production cut, with shipments falling to an average of 10.5 million tons, 19.8% down from March 2019 (Figure 4).[12]

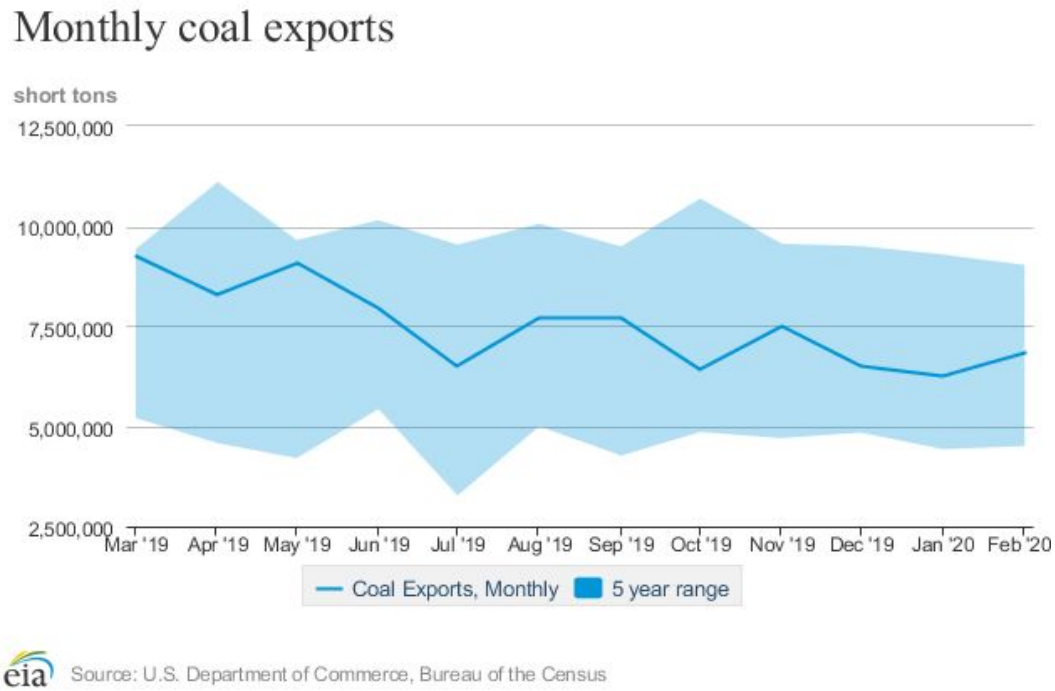


Figure 4: EIA Coal Report data showing the national coal exports over the past year.

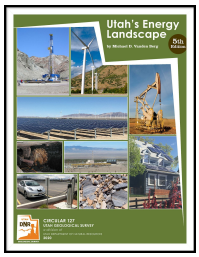
[9] EIA, Electric Power Monthly, April 24, 2020
[10] Bridget Reed Morawski, Market Intelligence, SNL
[11] EIA, Coal Markets Report, April 27, 2020
[12] Steve Piper, Market Intelligence, SNL

Closing

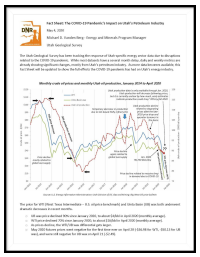
Emerging data and market volatility will continue to define the short-term energy outlook and establishing long-term forecasts will remain challenging for the energy and mining sector throughout 2020. As Utahns navigate and respond to the impacts of the COVID-19 pandemic, the Governor's Office of Energy Development and Utah Geological Survey will be continuing to assist our residents and the energy and mining industry during these challenging times. For more information or to subscribe to our COVID-19 Energy Sector Status Report, visit energy.utah.gov or contact Kevin Brooks, Energy Analytics Manager.

Additional Resources

Utah's Energy Landscape Report, 5th Edition



Fact Sheet: The COVID-19 Pandemic's Impact on Utah's Petroleum Industry



About Us

The Utah Geological Survey provides timely scientific information about Utah's geologic environment, resources, and hazards. For more information, please visit geology.utah.gov. In delivering on this mission, UGS

The Governor's Office of Energy Development's (OED) mission is to implement State Energy Policy and the Governor's energy vision that supports affordable, reliable, diverse and cleaner energy options. OED accomplishes this through strategic planning and programs, market-based incentives, and education/outreach tools that promote wise resource development, economic opportunity, innovation and workforce development.

OED is remaining active during the COVID-19 pandemic in providing industry assistance, constituent support, and offering and administering a variety of post-performance tax credits to encourage businesses and individuals to invest financial resources and create jobs in Utah. They include:

- Renewable Energy Systems Tax Credit (investment or production)
- Alternative Energy Development Tax Credit
- The High Cost Infrastructure Tax Credit
- Well Recompletion or Workover (for oil and gas developers)

For more information or to apply, visit energy.utah.gov or contact Richard Bell, Director of Incentives.