

Our View: The Worst Energy Crisis in Half a Century

Philip Verleger

October 4, 2021

The current energy crisis is on track to be among the worst in half a century – almost as bad as the crisis of 1973-1975 or 1978-1980 and worse than the one preceding the Great Recession of 2009. The consequence will be a severe recession and a significant drop in global oil and natural gas demand.

PKVerleger LLC measures the impact of the crisis in terms of increased expenditures on energy by OECD countries. As economists noted more than forty years ago, price increases function as a tax on the economy. Higher energy prices cut demand for other goods and services just like tax increases. The size of the previous energy spending increases, measured as a percentage of the OECD GDP the year before each crisis, shows the potential impact of the current problem.

1973-1975 crisis:	6.0%
1978-1980 crisis:	5.7%
2007-2009 crisis:	4.2%
<i>2021-2022 crisis:</i>	<i>4.5%</i>

Again, these numbers represent the amount of additional spending on energy as a share of GDP and the reduction in spending on other goods and services.

The prediction for the 2021-2022 crisis assumes oil prices remain below \$90 per barrel through the spring of 2022 and that natural gas prices have peaked. A severe winter could take prices higher. In a frigid winter with incredibly high gas prices, crude prices of more than \$100 per barrel, and an economic decline in the OECD early in 2022, the OECD GDP impact could rise above 8%.

We base our energy crisis assessment and estimates on the following developments from the last two weeks.

Natural gas prices in Europe have risen by three hundred percent. Our September 27 Notes at the Margin discussed the price surge through mid-September. The rise continued last week. The increase stems from a gas reserve shortage that can only be eased by a consumption decline. An economic downturn into recession or worse would boost the chances of such a decrease coming about.

The price impact of natural gas demand shortfalls is spilling over to oil and coal. Bloomberg has noted the sharp jump in carbon, electricity, natural gas, and coal prices in Europe since January 1. Carbon prices have risen from €33 to €67 per metric ton. German power rates have increased from €50 to €105 per megawatt-hour. Natural gas has gone from €19.1 to €75.3 per megawatt-hour. Coal has moved from \$68 to \$139 per ton. In every case, prices have more than doubled. To put matters in perspective, wholesale energy prices in the United States rose by less than twenty percent from January 1974 to January 1975. The situation in Europe seems three or four times worse than what the US experienced five decades past.

Sixty-one container ships lie anchored off the California coast. They are waiting to unload at the Port of Los Angeles or Port of Long Beach. A further twenty-nine ships are “adrift” off the California coast, waiting to anchor.¹ The backup is fouling supply chains across the US. The chaos is being exacerbated by a shortage of truck drivers, storage space, and containers. The latter often get parked at warehouses to await offloading.²

Meanwhile, a shortage of electricity in China is forcing factories to shut. Reuters’ John Kemp reports that electricity use has surged by thirteen percent in China over the first eight months of 2021 compared to those months in 2020.³ Most of China’s power comes from coal-fired stations, which increased output by fourteen percent. However, Chinese coal production is up only six percent due to the Covid-19 impacts and safety issues. Inventories have been drawn, and coal prices have risen from \$90 to \$210 per ton. China is also trying to cut coal consumption to reduce emissions. This action has led to power outages at manufacturing hubs. As *The Wall Street Journal* notes, many plants are closing, cutting production of vital goods such as computer chips.⁴

Consumers are lining up to buy gasoline or diesel fuel in the United Kingdom due to a shortage of tanker truck (or lorry) drivers. A Reuters’ story explains that many UK drivers laid off during the pandemic have decided to do something else.⁵ As the article notes, “The haulage industry has warned for years that deteriorating conditions are putting workers off but the problems came to a head this month when retailers and oil companies said they did not have enough drivers to fully maintain operations.” Wages are being upped but attracting few workers. The driver situation in the US is terrible as well.

The computer chip shortage is constraining automobile production. 3M’s chief financial officer told an audience at a Morgan Stanley conference that the deficit that has idled auto factories worldwide will likely last into 2022 and cut auto output by six percent from 2020.⁶

¹ Gregory Schmidt, “A Record Number of Cargo Ships Off the California Coast Shows a Crack in the Supply Chain,” *The New York Times*, September 23, 2021 [<https://tinyurl.com/2r9syf2k>].

² Costas Paris and Jennifer Smith, “Cargo Piles Up as California Ports Jostle Over How to Resolve Delays,” *The Wall Street Journal*, September 27, 2021 [<https://tinyurl.com/3mk9saxd>].

³ John Kemp, “China’s widening electricity crisis caused by coal crisis,” Reuters, September 28, 2021 [<https://tinyurl.com/5v9khzat>].

⁴ Stella Yifan Xie, Yang Jie, and Stephanie Yang, “China Power Outages Pose New Threat to Supplies of Chips and Other Goods,” *The Wall Street Journal*, September 27, 2021 [<https://tinyurl.com/23mzajpd>].

⁵ Victor Jack, “British truckers: life on the road with people smugglers, fuel thieves, and few toilets,” Reuters, September 27, 2021 [<https://tinyurl.com/wnvkkv8>].

⁶ Ryan Beene, “3M Doubles Its Estimated Drop in Car Output on Chip Shortage,” Bloomberg, September 13, 2021 [<https://tinyurl.com/ybta8ver>].

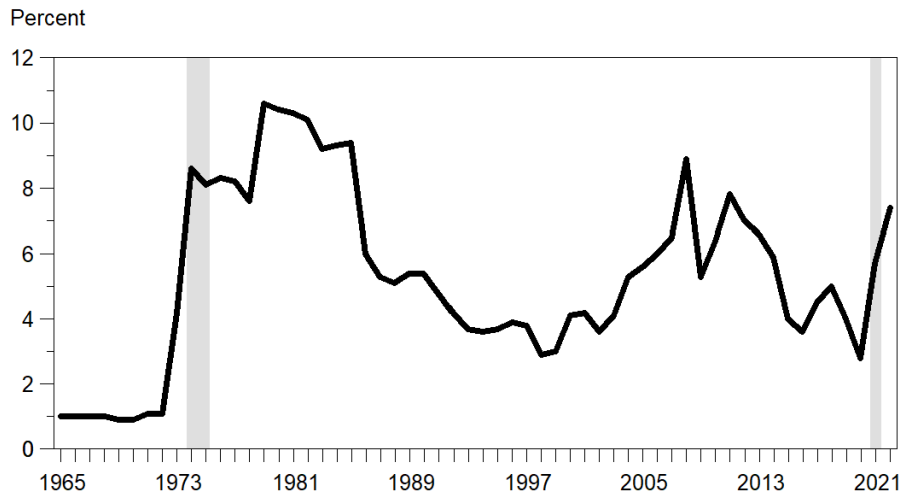
These and other stories point to a significant economic problem. However, the impact cannot be translated into inputs to the models used to forecast economic growth. Thus, forecasters still optimistically see continued growth in 2021 and 2022. They are wrong.

Our view is that the global economy will experience an economic upheaval over the next twelve months that is comparable to the 1973-1974 experience absent aggressive central bank interventions and government spending boosts in all countries. The table below presents our calculations. The figure that follows the table depicts the energy price impact in terms of the share of energy spending in the OECD GDP.

Changes in GDP Growth for the United States, Japan, and Western Europe from 2021 to 2022 Due to the Energy Crisis (Percent)					
	Pre-Crisis Forecast	Energy Crisis Impact on GDP Growth		Net Growth Rates	
		Natural Gas Prices Double and Current Oil Price Sustains	Natural Gas Prices Triple and Current Oil Price Sustains	Natural Gas Prices Double and Current Oil Price Sustains	Natural Gas Prices Triple and Current Oil Price Sustains
USA	4.20	-2.20	-2.80	2.00	1.40
W. Europe	4.30	-2.85	-3.20	1.45	1.10
Japan	3.00	-3.60	-4.00	-0.60	-1.00

Source: Consensus Economics; PKVerleger LLC.

Oil, Natural Gas, and Coal Expenditures as Percentage of OECD GDP, 1965 to 2021 and Projected for 2022



Note: Shaded areas mark recessions.
Source: PKVerleger LLC.

