



SHIELD

by SOURCEREEL

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National Security Newsletter

October 2021



In our October 2021 SHIELDWatch Newsletter, we look to the future of commerce as the world begins to recover from the global pandemic. Businesses are reopening production, people are returning to work, and demand is higher than ever. In our first article, the International Energy Agency explores the effects of economic recovery on global energy demands - most notably the severe increase of fossil fuels to power reopening production facilities. As vaccines become more accessible, workers are returning to manufacturing and rebuilding supply chains. The increase of renewable energy sources seen over the last year simply cannot keep up with the drastic pace. The second article looks at the Phase One Agreement between the United States and China. During the beginning of 2020, China agreed to approximately \$200 billion in purchases by the end of 2021. To date, China has fulfilled only 62-69 percent of their obligation, which begs the question of how will China make up for this deficit, and what will happen if they do not? Following that, the American Action Forum highlights the tariffs put into place during the Trump Presidency, and how they remain in effect today. These tariffs have vastly increased the cost of production as supply chains are unable to shift away from suppliers who have raised commodity prices to cover the tariff rates. In our fourth article, Carbon Brief examines the rising demand for coal in China, which indicates an increase in production, but also draws attention to the political side of the equation. In previous years, China imported a majority of their coal from Australia. But China has since cut ties with Australia over their support of an investigation into China's handling of the Coronavirus outbreak in Wuhan Province. Our final article turns to the labor statistics of the United Kingdom, as the nation attempts to re-open, they face a shortage of workers, even with the highest number of pay-rolled employees ever seen. The global economy is coming back online, but supply chains are far from set, or even stable at this point. And finally, we include an excerpt from Sourceree's upcoming Belt and Road Initiative (BRI) Spatial Information Corridor full report, watch for it to be published soon!

-- Adam Murphy, Sourceree President



Assessing the effects of economic recoveries on global energy demand and CO2 emissions in 2021

Global Energy Review 2021

International Energy Agency

April 2021

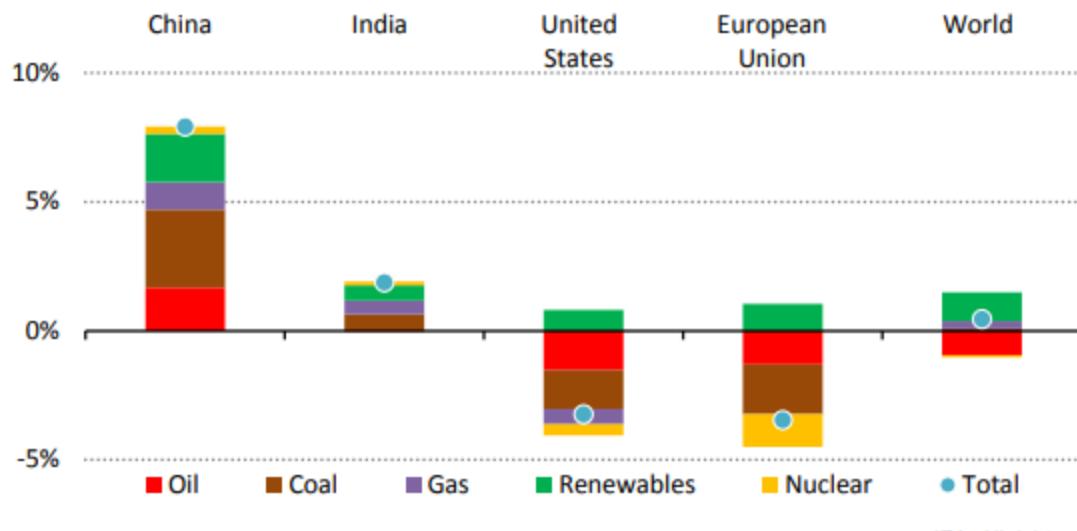
The annual Global Energy Review assesses the direction energy demand and carbon dioxide emissions are taking in 2021. The statistical analysis confirms estimates from 2020 and provides insight into how economic activity and energy use are rebounding around the world. Accelerating COVID-19 vaccinations in major economies and widespread fiscal responses to the economic crisis are boosting the outlook for economic growth. Energy demand is a direct indicator of production, and growing oil consumption is an indicator of renewed travel and supply chain movement.

Select excerpts from the piece:

The Covid-19 pandemic continues to impact global energy demand. Third waves of the pandemic are prolonging restrictions on movement and continue to subdue global energy demand. But stimulus packages and vaccine rollouts provide a beacon of hope. Global economic output is expected to rebound by 6% in 2021, pushing the global GDP more than 2% higher than 2019 level.

Emerging markets are driving energy demand back above 2019 levels. Global energy demand is set to increase by 4.6% in 2021, more than offsetting the 4% contraction in 2020 and pushing demand 0.5% above 2019 levels. Almost 70% of the projected increase in global energy demand is in emerging markets and developing economies, where demand is set to rise to 3.4% above 2019 levels. Energy use in advanced economies is on course to be 3% below pre-Covid levels.

Global energy demand in 2020 fell by 4%, the largest decline since World War II and the largest ever absolute decline. The latest statistical data for energy demand in the first quarter of 2021 highlights the continued impacts of the pandemic on global energy use. Building on Q1 data, projections for 2021 indicate that as Covid restrictions are lifted and economies recover, energy demand is expected to rebound by 4.6%, pushing global energy use in 2021 0.5% above pre-Covid-19 levels. The outlook for 2021 is, however, subject to major uncertainty. It depends on vaccine rollouts, the extent to which the Covid-19-induced lockdowns scarred economies, and the size and effectiveness of stimulus packages. Current economic outlooks assume global GDP will surpass 2019 levels, lifting demand for goods, services, and energy. However, transport activity and, particularly, international travel remain severely suppressed. If transport demand returns to pre-Covid levels across 2021, global energy demand will rise even higher, to almost 2% above 2019 levels, an increase broadly in line with the rebound in global economic activity.

**Change of primary energy demand by region and by fuel in 2021 relative to 2019**

The world's biggest economies have been impacted by Covid-19 to different degrees. Energy demand across advanced economies fell by over 6% on average in 2020, with every advanced economy at some point experiencing a contraction of economic output.

Most emerging market and developing economies also experienced a drop in energy demand in 2020, albeit less than in advanced economies. Demand declined 5% in India, around 3% in Southeast Asia, 2% in the Middle East and 1.5% across Africa.

China was a notable exception, the only major economy to experience both an increase in economic output and in energy demand in 2020. While restrictions to control the outbreak of Covid-19 depressed demand in the first quarter, the economy began to recover from April. For the remainder of the year, energy demand grew by 6% on average from pre-Covid-19 levels. Despite the impressive growth of renewables, increasing electricity demand led to an all-time high coal burn in December 2020.

US – China phase one tracker: China's purchases of US goods

Peterson Institute for International Economics

Authors: Chad P. Brown

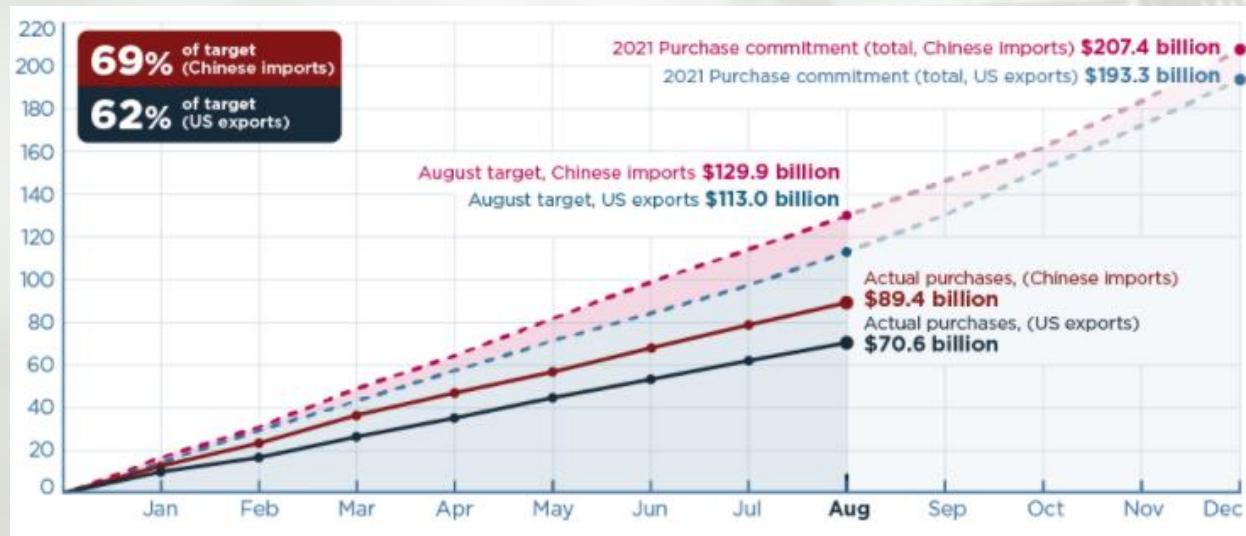
27 September 2021

The Peterson Institute for International Economics has worked to analyze the agreement between the United States and China since the beginning of 2020. The agreement entails roughly \$200 billion of purchases from the United States. However, at the time of the report, China has only purchased between 62-69 percent of the agreement depending on which method of measure is utilized. It appears unlikely that China will be able to recoup the difference before the end of the year.

Select excerpts from the piece:

On February 14, 2020, the Economic and Trade Agreement Between the United States of America and the People's Republic of China: Phase One went into effect. China agreed to expand purchases of certain US goods and services by a combined \$200 billion for the two-year period from January 1, 2020, through December 31, 2021, above the 2017 baseline levels.

For 2021, China has committed to purchase no less than an additional \$98.2 billion of covered goods from the United States relative to these 2017 baselines. Defining the 2017 baseline using US export statistics implies a 2021 target of \$193.3 billion (blue in graph below). Defining the 2017 baseline using Chinese import statistics implies a 2021 purchase commitment of \$207.4 billion (red in graph below).



Through August 2021, China's total imports of covered products from the United States were \$89.4 billion, compared with a year-to-date target of \$129.9 billion. Over the same period, US exports to China of covered products were \$70.6 billion, compared with a year-to-date target of \$113.0 billion. Through August 2021, China's purchases of all covered products reached 69 percent (Chinese imports) or 62 percent (US exports) of the year-to-date target.

The 2021 phase one commitments of additional trade (on top of 2017 baseline) are \$19.5 billion (agriculture), \$44.8 billion (manufactured goods), and \$33.9 billion (energy). These commitments are found in the agreement's Annex 6.1.

China's commitment to purchase additional:

- Covered Agricultural Products: \$43.6 billion
- Covered Manufactured Products: \$123.1 billion
- Covered Energy Products: \$40.7 billion

For all uncovered products—making up 29 percent of China's total goods imports from the United States and 27 percent of US total goods exports to China in 2017—the phase one agreement does not include a legal target. Through August 2021, China's imports of all uncovered products from the United States were \$26.8 billion, 13 percent lower than in 2017.

The Total Cost of U.S. Tariffs

American Action Forum

Authors: Tom Lee and Jacqueline Varas
2 August 2021

In this report, the authors highlight the end-point cost of the many tariffs put into place by the Trump Administration. As with most tariffs, the overhead cost to the businesses targeted end up getting passed along to the consumer. In the cases below, this has been the norm, as most of the items make up critical points in supply chains. While a US-based company may change their suppliers in order to avoid the increased costs associated with the tariffed materials, it takes time to do so, time in which they must either halt production, or continue to pay the higher prices. In addition, retaliatory tariffs add even more costs to the various supply chains.

Select excerpts from the piece:

The table below lists the approximate value of imports that are currently facing new tariffs under President Trump [and still in effect under President Biden]. It additionally displays estimates of how the tariffs could increase nationwide consumer costs, assuming that 100 percent of the costs from the tariffs will be passed on to consumers and that current import levels will not change. While this estimate is an upper-bound, it represents the upward pressure that is placed on all prices in the economy.

Tariff	Value of Affected U.S. Imports (2020)	Tariff Rate	Additional Cost Burden
Section 232, Steel	\$7.2 B	25%	\$1.8 B
Section 232, Aluminum	\$5.2 B	10%	\$518.7 M
Section 232, Derivative Steel Articles[3]	\$405.9 M	25%	\$101.5 M
Section 232, Derivative Aluminum Articles[3]	\$217.8 M	10%	\$21.8 M
Section 301, List 1	\$20.9 B	25%	\$5.2 B
Section 301, List 2	\$9.8 B	25%	\$2.4 B
Section 301, List 3	\$112.8 B	25%	\$28.2 B
Section 301, List 4A	\$175.4 B	7.5%	\$13.2 B
Section 301, List 4B	\$164.4 B	Suspended	\$0
Total[4]	\$331.9 B	7.5 – 25%	\$51.4 B

Altogether, the tariffs could increase nationwide consumer costs by \$51 billion annually. Previously, after former President Trump had already imposed the first three rounds of tariffs on approximately \$250 billion of U.S. imports from China, the president ordered new 10 percent tariffs to be imposed on the remainder of imports from China. Upon China announcing its

intention to retaliate, the former president increased these new tariffs from 10 percent to 15 percent... China's retaliation also spurred former President Trump to order an increase in the third tranche of tariffs – 25 percent tariffs already in effect on roughly \$200 billion of imports – to 30 percent.

These tariffs were scaled down as a part of the president's "phase one" trade deal with China. As a part of the deal, former President Trump reduced the tariffs previously imposed on September 1, 2019... Based on 2019 import levels, these actions together saved American consumers \$43.4 billion per year. The phase one trade agreement also included an agreement from China to purchase \$200 billion of additional U.S. exports (over 2017 levels) in the next two years, including \$77 billion of manufactured goods and \$32 billion of U.S. agriculture products, as well as provisions on intellectual property, technology transfer, agriculture, financial services, and currency. Because of the COVID-19 pandemic, however, China's ability to fulfill these purchasing commitments has come into question.

The president's tariffs have significantly affected U.S. trade levels. Research [by the National Bureau of Economic Research] has found that the tariffs caused importers to shift away from China and reorganize supply chains. Even more, the president's tariffs have decreased trade altogether – both imports and exports – which raises prices and reduces options for both consumers and businesses in the United States.

It was not until 2019 that the tariffs started having a noticeable impact on import levels, meaning that throughout 2018, importers were likely forced to pay the entirety of the tariffs themselves as they were unable to shift supply chains to avoid them.

In addition to raising costs for American consumers, tariffs have also resulted in significant retaliation by other countries against U.S. exports. The table below details every retaliatory action taken against the United States thus far and the value of U.S. exports that are adversely affected.

Country	Retaliation Rate	Value of Affected U.S. Exports (Billions)
Retaliation to Section 232 Tariffs		
European Union	10-25%	\$1.9
China	15-25%	\$2.3
Turkey	4-70%	\$1.0
Russia	25-40%	\$0.2
India	10-50%	\$1.3
Retaliation to Section 301 Tariffs		
China Parts 1 – 4	5 – 25%	\$68.4
European Union	15 – 25 %	\$4.0
Total Retaliation		
Total	4-70%	\$79.1 B
* The bulk of these goods are already facing retaliation and now subject to tariff increases		

[Xi's 'no overseas coal' pledge; More order on domestic coal; 'Ball in China's court'](#)

China Briefing, 23 September 2021

Carbon Brief

23 September 2021

This China Briefing identifies the climbing use of coal power in China. It highlights the idea that President Xi Jinping is pressing for clean burning coal plants and wants to stop importing the fuel. This report indicates two major points. The first, that China is continuing to ramp up production as the world recovers from the COVID-19 pandemic. And the second, that China is potentially concerned about the supply chain of their energy infrastructure. In the past, China has imported a majority of their coal from Australia but has cut that tie following Australia's support of an investigation into China's handling of the Coronavirus outbreak in their Wuhan Province.

Select excerpts from the piece:

China's president Xi Jinping announced that the country "will not build new coal-fired power projects abroad" in his speech at the United Nations General Assembly on Tuesday.

Separately, Xi gave new orders to the domestic coal industry while inspecting a factory last week. According to state media, Xi stated that coal is the country's "main [source of] energy", but added that the industry must develop in a "green, low-carbon" way. In particular, he called for technological innovation for the coal-to-chemical industry.

In addition, he affirmed that China "will make every effort" to deliver on its goals of peaking emissions before 2030 and achieving carbon neutrality before 2060, which were announced by Xi at the assembly last September.

"Depending on how the policy is implemented, the move could significantly limit the financing of coal plants in the developing world".

António Guterres, secretary-general of the UN, said that he welcomed Xi's announcement that "China will end financing of coal fired power plants abroad & redirect support to green & low carbon energy".

Prof Yuan Jiahai from North China Electric Power University shared with Carbon Brief his understanding of Xi's order: "A straightforward understanding is since [China] still needs to rely on coal for a long time, [we] must control the total [consumption] of coal, plan pathways to reduce and replace [the consumption] clearly and push for the transition and upgrade for the [amount of] coal [we] have to use."



Labor market overview, UK: October 2021

Office for National Statistics

Author: Debra Leaker

12 October 2021

United Kingdom labor statistics for October show an increase in the size of the nation's workforce (the number of payrolled employees has risen above the pre-pandemic heights in February 2020), but not back to pre-COVID levels for unemployment or job vacancies (which remain the highest on record). This is most notably seen in the news of potential gas shortages due to a lack of truck drivers. This kind of slowdown is detrimental to all supply chains, as commerce is unable to move forward without delivery of products. British military forces were used to aid in the delivery of gasoline, in hopes it would bridge the gap until this deficiency could be remedied.

Select excerpts from the piece:

The most recent data show the labour market continuing to recover. The number of payroll employees showed another monthly increase, up 207,000 to a record 29.2 million in September 2021, returning to pre-coronavirus (COVID-19) pandemic (February 2020) levels.

Following a period of employment growth and low unemployment, since the start of the pandemic the employment rate generally decreased, and the unemployment rate increased. However, since the end of 2020, both have shown signs of recovery. Our latest Labour Force estimates for June to August 2021 show the employment rate increased by 0.5 percentage points on the quarter, to 75.3%. and the unemployment rate decreased by 0.4 percentage points, to 4.5%.

Payrolled employees

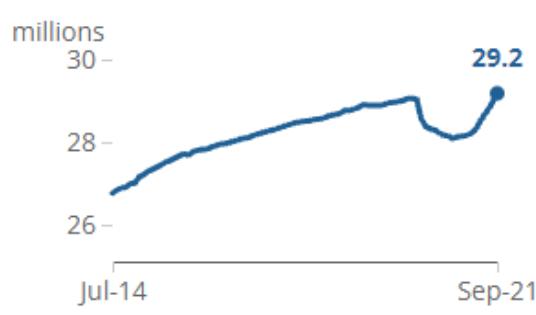
The number of payrolled employees

Monthly change: ▲ 207,000

Since Feb 2020: ▲ 122,000

The number of payroll employees is now above pre-pandemic levels

Source: HMRC PAYE RTI



Unemployment rate

Unemployment rate (all aged 16+)

Quarterly change: ▼ -0.4pps

Since Dec-Feb 2020: ▲ 0.5pps

Source: ONS LFS



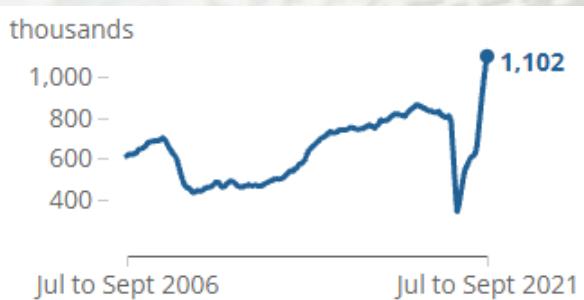


Job vacancies

Number of job vacancies

Vacancies increased on the quarter and are now at record levels

Source: ONS Vacancy Survey



Preview

China's Belt and Road Spatial Information Corridor



satellites.

The modern great power struggle is reaching new heights, both figuratively and literally. The notion of connectivity has undergone a tremendous change in the twenty-first century, with satellite communication and navigation becoming commonplace terms. Today, immediate access to global connectivity is one driving factor in building a mega-constellation of hundreds of Low-Earth Orbit broadband

The globalization of the world's economy means connections must go beyond the peripheral access to roads, rails, and waterways. Connectivity now must include real-time virtual communication, a digital infrastructure that underpins and weaves throughout all other forms of connection. China's Belt and Road Initiative (BRI) envisions a next generation digital infrastructure and satellite network around the world.

China's BRI is broken into several specific enterprises – including a digital silk road, and the Space Silk Road, also known as the Spatial Information Corridor. The Spatial Information Corridor allows for the broadest footprint and ability to affect the entire global community. This portion of the BRI is intended for three major efforts: to enable navigation and communication for other BRI efforts; to demonstrate China's technological prowess; and to enable a broader reach for China's international influence.

While much research has been conducted regarding the “new space race” between the United States and China, this research paper seeks to explore beyond the capability to exploit the scientific and technological advantages of a successful space program – to highlight the near earth and terrestrial advantages of tying China's space program to their massive economic engine, the Belt and Road Initiative.

Follow SHIELD by Sourceree on LinkedIn to find Sourceree's full report on China's Space Silk Road being published soon!

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Sourceree's SHIELD program is a comprehensive supply chain risk management (SCRM) solution designed to help answer questions about supply chain disruptions and risks, particularly foreign investment.

