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FutureMetrics: COVID-19 unlikely to reduce demand for industrial wood pellets

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The COVID-19 pandemic is likely to cause a global economic depression. Many sectors are being and will continue to be strongly negatively affected. Many people will suffer both from the disease and from the economic fallout. The magnitude and reach of this crisis is huge and far reaching. This article will focus on how the pandemic will impact one small sector: the industrial wood pellet industry.

The two primary pathways for the evolution of this pandemic are: (1) The pandemic accelerates uncontrollably and millions of people die; or (2) The pandemic is attenuated by policies and rules restricting contact with other people that limits the spread of the disease and greatly reduces the number of deaths. Both pathways will shock national economies. If policies are aggressive and people are compliant, and if the rules are enforced, pathway 2 will limit the medical consequences.

But there is no avoiding the economic consequences. The economic consequences come from three directions.

Most of the economic consequences will be caused by the ***demand side*** shock. That is, the typical commerce that takes place from the purchase of goods and services will be greatly reduced as a large segment of the population stops earning wages and rapidly reduces spending. The service sector now accounts for about 80 per cent of all U.S. jobs[1] and many people in that sector are not going to work and earning a wage. Much of that population has limited or no savings to draw upon. Even those with savings or who are continuing to earn a wage will spend less and focus spending on necessities.

The multiplier effect[2] works both positively and negatively. A rapid drop in spending has a magnified negative impact on economic activity. For both humanitarian and economic reasons, governments are rightly contemplating fiscal stimulus polices that will bolster spending. It remains to be seen how effective they will be and how deep the economic slowdown will be. A demand side shock can also propagate into the industrial pellet industry (discussed below) via changes in the supply of woody feedstocks to the pellet mills.

There is also the potential for a ***supply side*** impact within the manufacturing sector as certain industries may curtail operations to limit personal contact. Some factory and assembly operations that are not highly automated will likely cease while the pandemic rages.

[1] Bureau of Labor Statistics https://www.bls.gov/emp/tables/employment-by-major-industry-sector.htm
[2] https://www.investopedia.com/terms/m/multiplierеffect.asp

Finally, relevant to the industrial pellet industry, there is the likelihood of *governmental interventions* that could impair logistics and also possibly temporarily alter renewable power demand.

Demand

As economic growth becomes negative, many sectors and industries will suffer from a drop in demand. However, the demand for industrial wood pellets is somewhat independent of drops in economic activity. Power demand may decline marginally in a slowdown, but the power generated by wood pellets in the major European, UK, and Japanese importing markets will have a place in the grid even if other sources such as natural gas have to turn down to meet lower aggregate electricity demand. The potential exception is South Korea (more below on South Korea).

Backed by long-term offtake agreements, it is unlikely that fundamental demand for industrial wood pellets will decline in any significant way in the markets supplied by North American and European pellet producers as a result of the COVID-19 pandemic. However, as noted below, policy changes could impact demand.

Supply

On the supply side, many highly automated wood processing plants such as sawmills and pellet mills should be able to operate without compromising worker safety or the safety of their families and their communities. FutureMetrics has spoken with several sawmills and pellet mills that have already implemented protocols that allow operations to continue with no close personal contact and with comprehensive and continuous attention to working with and sanitizing at-risk surfaces.

Lumber and wood pellet operations should be able to adapt to the requirements for social distancing, avoiding group gatherings, and the hygiene of people and surfaces with little impact on output and only a marginal increase in operational costs.

The wood supply chain is dominated by machinery operated by single individuals in the cabs of harvesting machinery and trucks. Sawmills and wood pellet plants are highly automated. For the operations and maintenance staff, social distancing, not congregating in the control room or in the break room, and frequent hand sanitizing will be the new normal until the pandemic is quashed. Office staff may have to work remotely.

In all cases, just as is the case with most of the population, normal routines that include close social interaction will have to be changed. But it is likely that production of pellet fuel for export can continue.

While the in-woods and transport logging operations should be able to continue to meet demand, it is likely that sawmilling operations will slow as lumber demand falls. Some pellet factories that are highly dependent on sawmill residuals will experience higher costs for alternative feedstocks or will have to move to lower production rates (or both). A drop in lumber demand will impact the demand for sawlogs. Some of the roundwood on the upper part of the tree that is harvested for the sawlogs is not suitable for conversion to lumber and typically goes

to pulp and paper mills or pellet mills. A drop in sawlog demand will likely change the dynamics of supply and the cost of feedstock for pellet mills that depend on roundwood by-products from sawlog harvesting.

Most North American port operations for bulk cargo shipping are likely to continue operating. Keeping workers protected is critical, but, given the automation of the systems, close contact between people is not necessary. Imports and exports of all types of bulk goods and commodities are fundamental to social stability and for the support of those manufacturing sectors that remain active. There are many reasons to work out how to run bulk loading and unloading terminals safely during a pandemic and to implement and enforce those pandemic-related work rules. Container and breakbulk shipping may be impacted. Some container and breakbulk cargos will be quarantined and possibly subject to decontamination procedures to prevent the spread of the virus on plastic, steel, or cardboard surfaces. Wood pellets in bulk ship holds should not be impacted.

Unless recommended workplace procedures and protocols change with new information on the transmission of the virus, the supply side of the industrial wood pellet industry should weather the pandemic without violating the rules of pathway 2 and putting workers and their communities at risk.

For pellets shipped in containers (mostly to South Korea and mostly from Vietnam), there may be disruptions. Market analysis on March 20 by Czarnikow suggests that the "drop in container vessels returning from Europe and North America has led to a significant equipment imbalance with a surplus of containers in places such as the U.S. West coast and a shortage of equipment in many Asian ports."[3] Supply chain frictions due to quarantines, decontamination measures, and changes in demand for containerized freight will impact the shipping of pellets via container. The cost of shipping via container from Vietnam to South Korea, which has traditionally been very low due to surplus empties in Vietnam, is likely to increase. If empty containers have to be shipped to Vietnam or other Southeast Asian exporters, shipping costs will increase significantly. As FutureMetrics has noted in several white papers, the South Korean pellet market exhibits a very high risk for unstable pellet demand even without the impacts of a pandemic. Almost all pellet imports to South Korea are not based on long-term offtake contracts. If the delivered cost of pellets rises significantly due to shipping cost increases and South Korea does not intervene in the Renewable Energy Certificate (REC) markets, demand in South Korea will fall and the impact will fall heavily on Southeast Asian pellet producers that are still able to manufacture and export.

Policy

What is most difficult to forecast is the impact of policies. For example, on March 19, Malaysian policymakers mandated that all non-essential businesses close. That includes Malaysian pellet plants.[4] Policy can impact the industrial pellet sector in two distinct ways.

[3] https://czapp.com/
[4] https://direct.argusmedia.com/newsandanalysis/article/2088446 Malaysia exported about 615,000 metric tonnes in 2019. 86% of those exports went to S. Korea.

The first is due to policies and rules that impact business activities such as transportation lockdowns and/or blanket border closures, and how a business is determined to be allowed to operate or not. It is possible that government policy could, as in Malaysia, designate elements of the wood processing sector non-essential and mandate shutdown. Government rules for business closures are already being put in place for many service-oriented businesses due to the unavoidable need for people to engage in contact-related actions that could allow the disease to be transmitted. Many automated manufacturing and logistics operations can function without close personal interactions and with enforceable rules for preventing spread by contact. Even so, governments may invoke the precautionary principle[5] and opt for policies that would impact the production and transport of pellets.

The second way that policy can impact the industrial wood pellet industry is from government decisions about renewable energy policies within those major importing countries such as the UK. Power generated from pellets is costlier than power from fossil fuels. It is possible that, as part of fiscal stimulus packages, temporary reductions are put in place on higher cost generation sources to, ostensibly, lower the cost of electricity. FutureMetrics thinks this is highly unlikely for two reasons.

First, the proportion of power from pellets on average is about eight per cent in the UK and is less in other countries. Stopping pellet baseload generated power would have a very small impact on the overall average cost of generation. Fiscal stimulus packages will be very large. The relatively tiny impact of the cost of pellet fuel versus fossil fuel will be a rounding error in the numbers.

Second, the consequences of that demand dropping out would be far reaching and harmful to many stakeholders both within and outside of the country. The ripple-effect economic consequences to rail, ports, shipping, producers, and producer supply chains associated with curtailing pellet use, combined with the multiplier effects of the loss of jobs, are orders of magnitude larger than the marginal cost of making electricity with pellet fuel versus fossil fuels. Much of those negative economic and jobs effects would be within the countries using pellet fuel for power generation.

Furthermore, the entire supply chain is based on long-term offtake agreements that provide legal protection to the flow of the pellets and the payments for the pellets. FutureMetrics thinks it is unlikely that pellet demand will be curtailed due to changes in renewable power policies.

Summary

Overall, the tonnages of wood pellets flowing through the industrial wood pellet sector into non-South Korean markets should not be significantly affected by the COVID-19 pandemic. That conclusion assumes that the mitigation measures to limit the number of infections and deaths are successful, and that the procedures and protocols for controlling the virus and assuring the safety of workers and everyone they contact, including their

[5] https://en.wikipedia.org/wiki/Precautionary_principle

friends, families, and communities, are similar to what they are as this white paper is being written on March 23, 2020.

While production volumes for most North American and European pellet producers are likely to be sufficient to fulfill their offtake agreements, the cost of production is expected to increase for the duration of the crisis. For Southeast Asian producers, it is likely that demand from South Korea will fall if container freight rates increase significantly.

Let us all work together to get this to peak and pass sooner rather than later. That means we all have to be careful and be considerate of the possibility of contagion almost all the time. We have to protect ourselves to protect our communities and countries. With that as a foundational condition, it is still rational and responsible to keep making and moving pellet fuel to power stations to help keep the lights on.

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