



What is Next for Fuel Pellet Exporters?

The ugly, the bad, and the good...

By William Strauss, PhD

September 2, 2026

This brief paper reviews trends in the markets for coal replacement biomass derived solid fuel (typically in the form of pellets produced from the residuals of the forest products industry). Some emerging trends are good. But the near-term trends are ugly!

The replacement of coal by upgraded and densified biomass (wood pellets) has defined a remarkable few decades of growth in the supply of this low carbon emissions energy source for use in power generating stations.

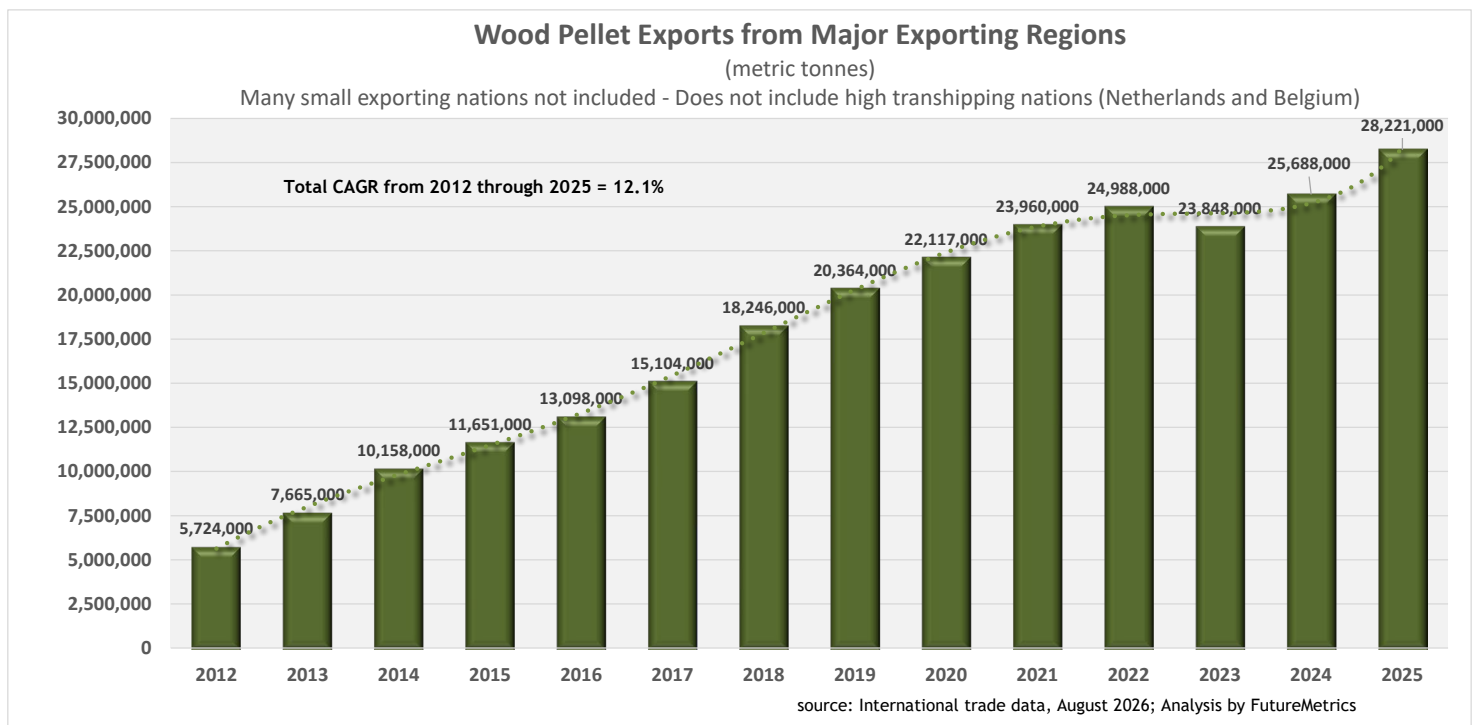


Figure 1 - Wood Pellet Exports from Major Exporting Regions

But the markets are changing. There is strong potential for disruption in the short-term. This is balanced with some encouraging trends in the traditional uses for fuel pellets (power generation, power generation with carbon capture, the coupling of green baseload power to datacenters), and with medium to longer term applications in new emerging markets in the use of biologic carbon replacing geologic carbon for the production of sustainable



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aviation fuel (SAF), sustainable marine fuel (SMF), renewable diesel fuel, for iron ore refining in blast furnaces, and for scrap steel recycling in electric arc furnaces.

A major change that portends one future trend in the fuel pellet export sector is that in July 2026 Japan overtook the UK as the world's largest importer of pellet fuel in both metric tonnes and in the value of the monthly imports (in US dollar terms). See Figure 2 and Figure 3 below.

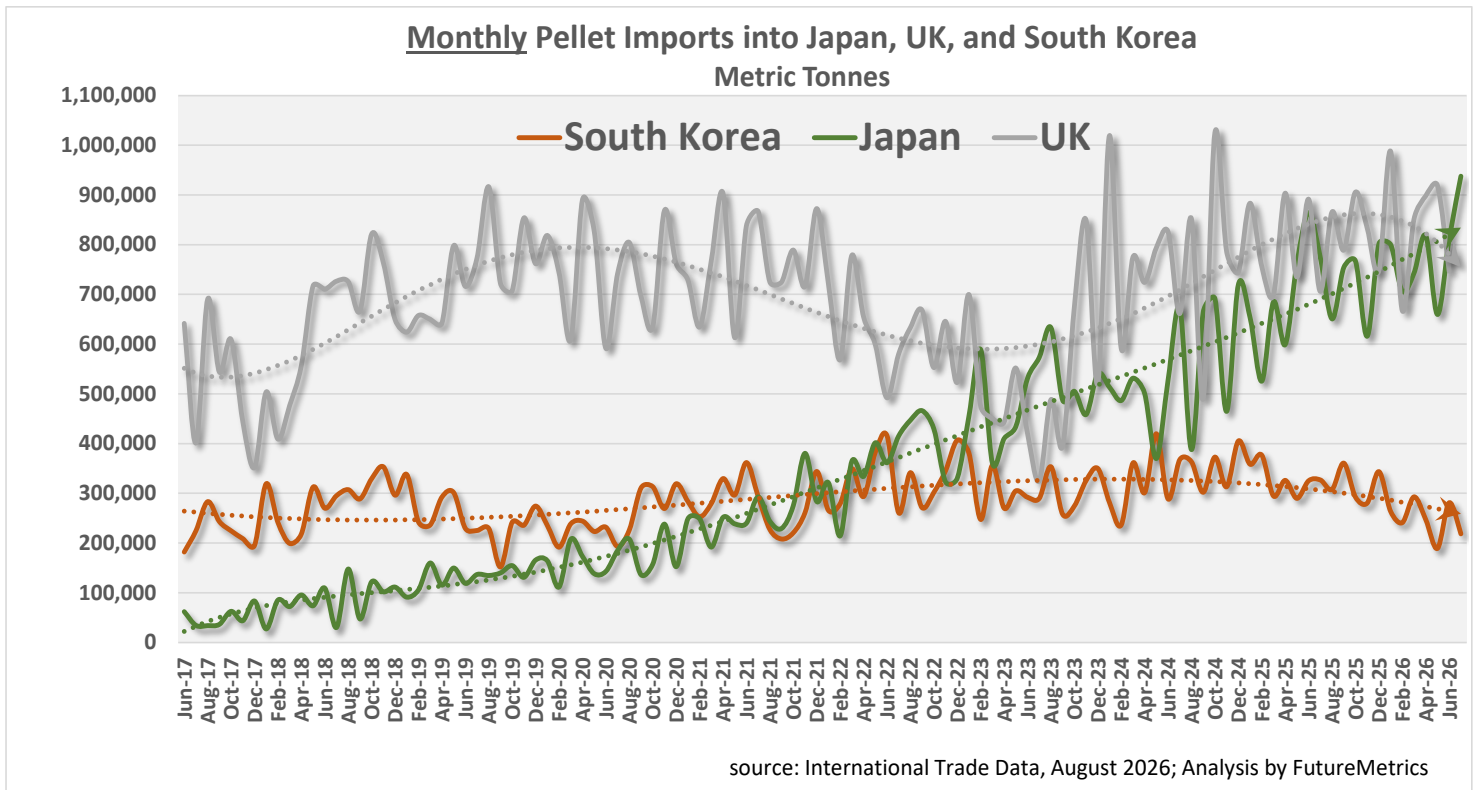


Figure 2 - Monthly Pellet Imports into Japan, UK, and S. Korea



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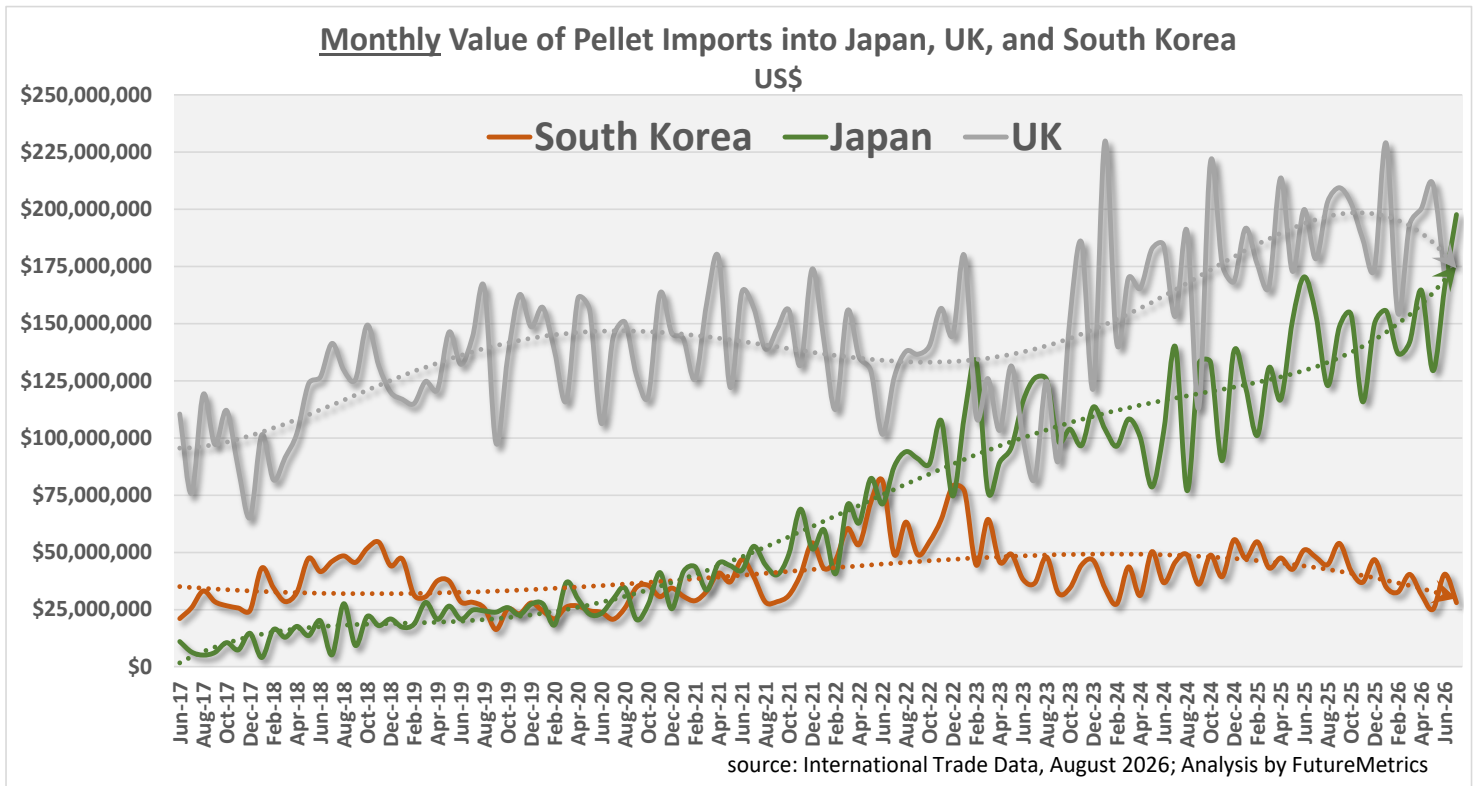


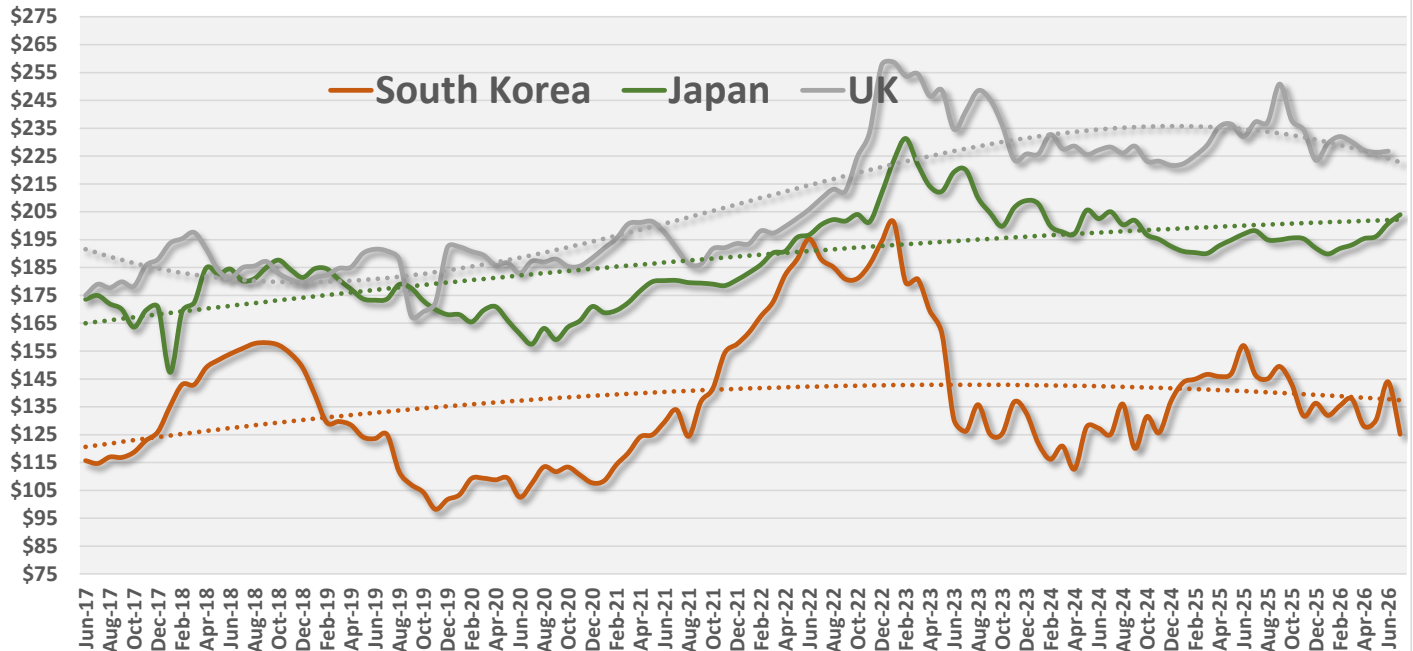
Figure 3 - Monthly Value of Pellet Imports into Japan, UK, and S. Korea

FutureMetrics uses trade data to estimate the actual prices paid for imported wood pellets. These prices are not the same as the spot price. Most imports into Japan and the UK are based on longer term offtake agreements and thus are not influenced by the supply and demand imbalances that drive the spot markets. South Korea imports are typically under shorter term (one year or less) agreements and thus S. Korean pellet import prices are more responsive to conditions of excess supply or excess demand.

Figure 4 below shows the estimated prices paid for pellets unloaded in Japan, the UK, and S. Korea. The values are in nominal terms (no inflation adjustment) and converted to dollar terms at the foreign exchange rates in the month in which the data is reported.



Monthly FutureMetrics' Estimated CIF Prices into Japan, UK, and South Korea
US\$/metric tonne at FX each Month - 3-month moving average



source: International Trade Data, August 2026; Analysis by FutureMetrics

Figure 4 - Monthly FutureMetrics' Estimated CIF Prices into Japan, UK, and S. Korea

FutureMetrics expects these general trends for the Japanese and S. Korean pellet import markets to continue. The UK's pellet import tonnages however will likely decouple significantly from the upward trajectory that has defined recent history (more on this below).

Japan's demand for coal replacement solid fuel produced from biomass sources is expected to continue to grow and is likely to exceed 10 million tonnes per year in 2027. As a result of Japan's demand growth, supply in the southeast Asian region has grown dramatically over the last 15 years. It should be noted that initial growth in pellet production SE Asian markets (primarily Vietnam) was driven by South Korean demand. However, South Korea's pellet demand growth, as Figure 2 shows, has remained essentially flat for the last decade.

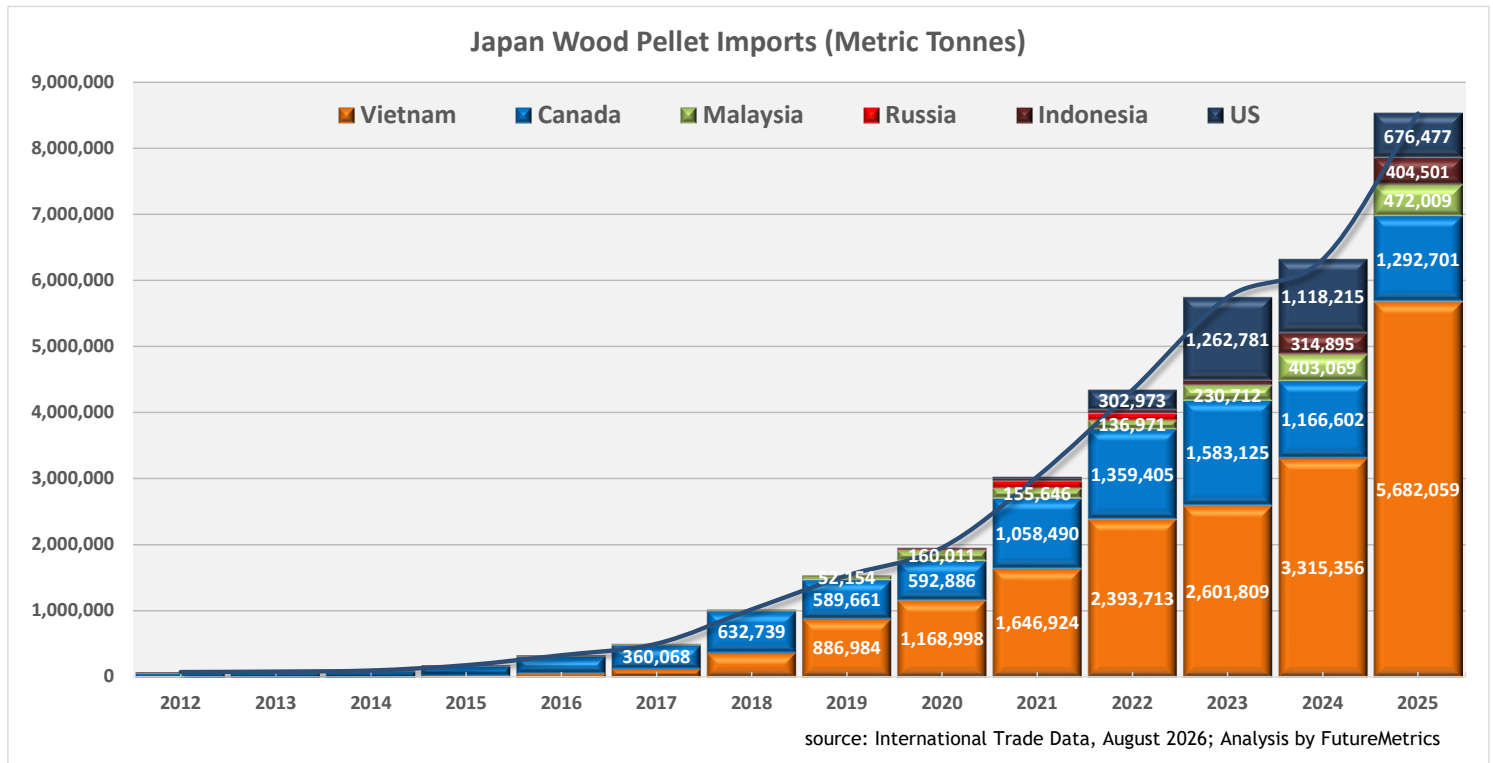


Figure 5 - Japan Wood Pellet Imports by Major Suppliers

In contrast to Japan, the UK's demand is expected to fall dramatically. The new government support policy for power generation from biomass fuels (the "Bridge Policy") will commence in April of 2027. As several of our previously published white papers have discussed in detail, the Bridge Policy will sharply limit the number of terawatt-hours that will receive government subsidies. The drop in pellet fuel imports into the UK could be as high as 5 million tonne per year. The UK is expected to import a total of 10.5 to 11.0 million tonnes in 2026.

A 5 million tonne per year drop in demand will have serious implications on the upstream supply chains.

The upcoming demand shock will disproportionately impact US pellet fuel producers. Over the last few years, the US has produced and exported about 80% of the wood pellet fuel imported into the UK (see Figure 6).



Market Share of Pellets Imported into the UK

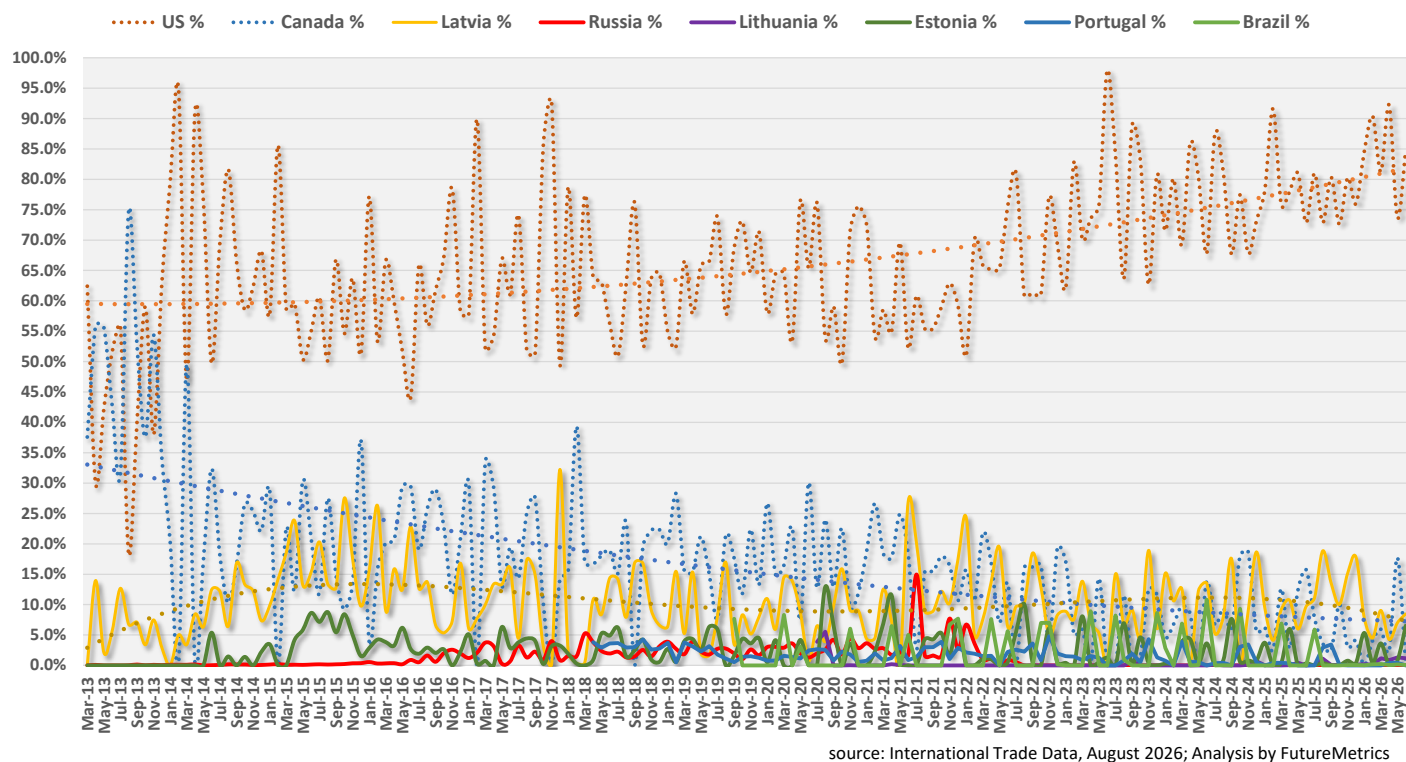


Figure 6 - Market Shares of Pellets Imported into the UK

80% of the potential 5,000,000 tonne per year drop implies a 4 million tonne per year excess supply over current levels for the US pellet producers.

The value of US pellet exports to the UK in 2025 was about \$1,820,700,000 (\$1.85 billion!) for shipments totaling 7,596,000 tonnes. The UK demand shock will likely reduce those totals significantly.

Compounding this challenge is a likely drop in demand in the Dutch markets; also beginning in 2027.

There is some potential growth in demand for pellet fuel in other western European markets; but there is also the potential that regional supply from the Baltic nations will fill some of that demand. FutureMetrics has produced a white paper on the potential for the Polish markets.

US exports to Japan will likely continue (see Figure 7 below). But given the competitive advantage on delivered price from SE Asian producers, and their steadily improving quality and sustainability credentials, it is highly unlikely that the Japanese market will be a significant substitute for US pellet producers for the loss of demand in the UK.



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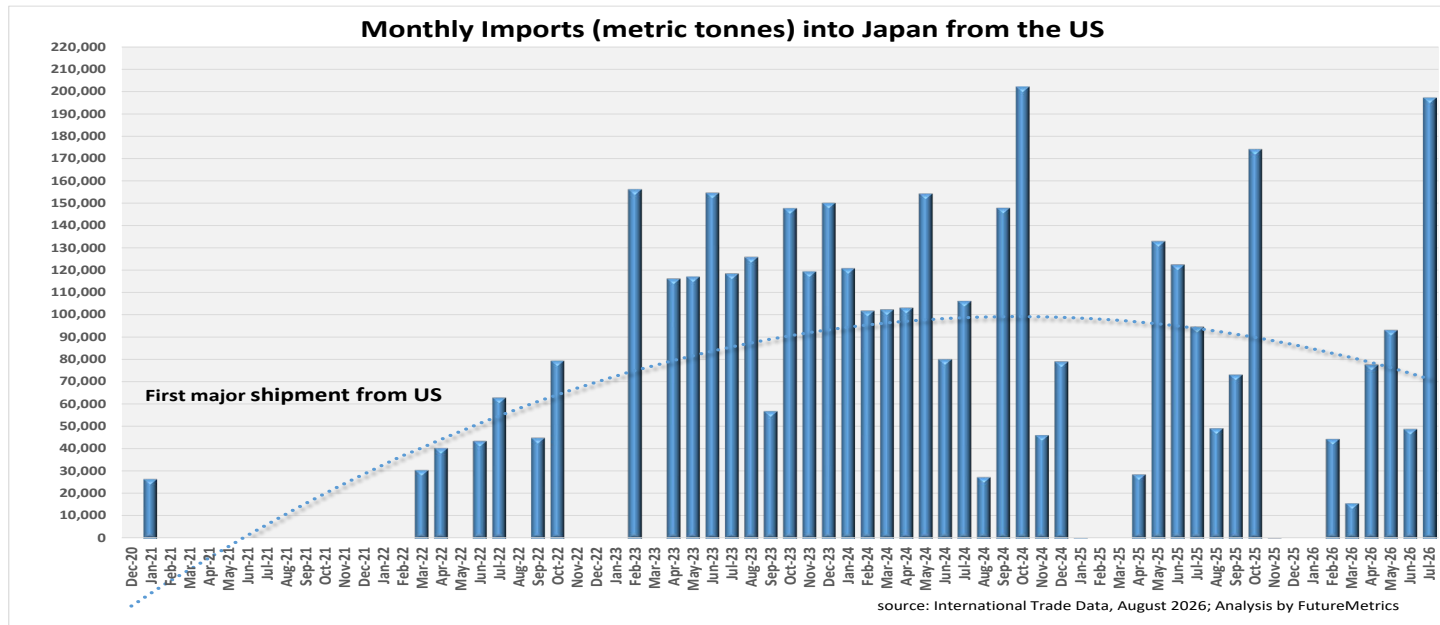


Figure 7 - Monthly Imports into Japan from the US

As a result, US export quantities will likely be much lower over 2027 and 2028 (and probably into the 2030's).

Figure 8 below shows a plausible scenario.

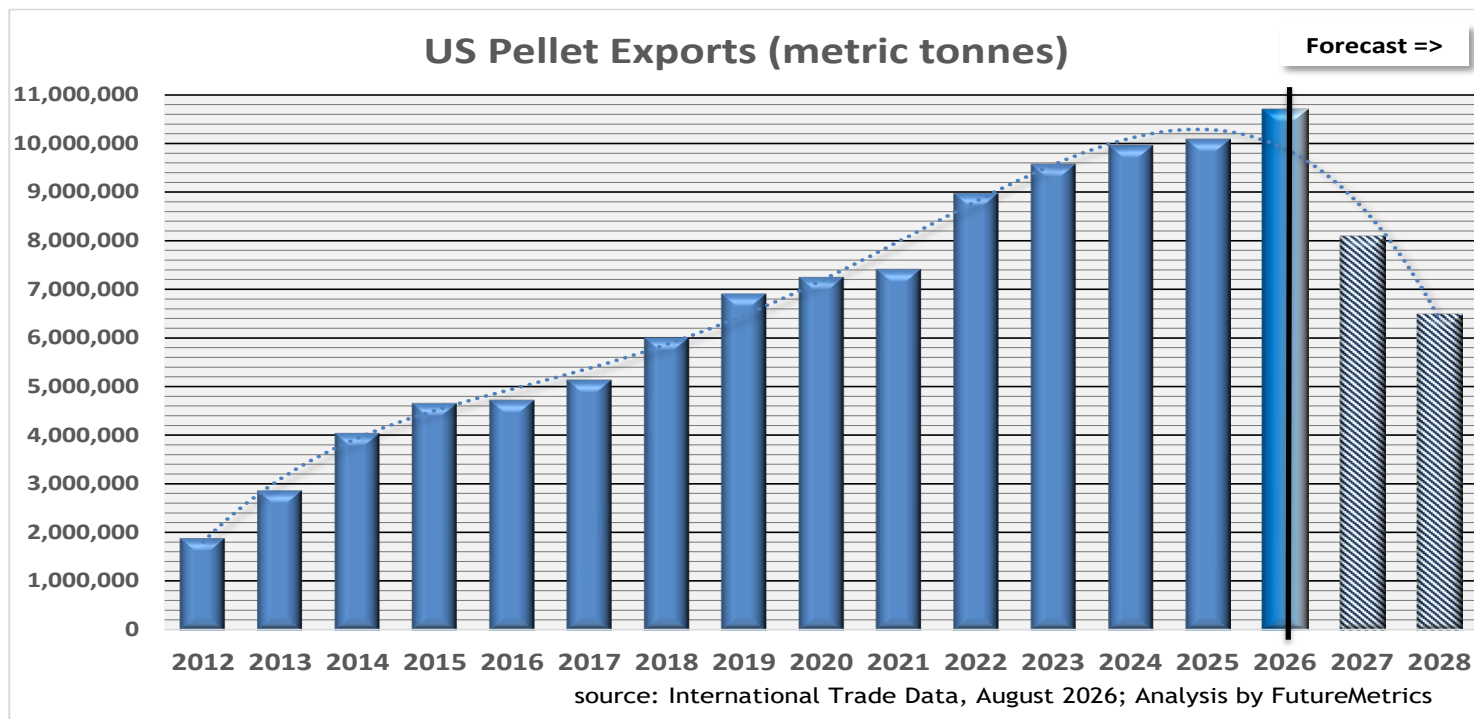


Figure 8 - US Pellet Exports with Forecast to 2028



“Creative destruction” can result in new, better, and more economically and environmentally efficient use of resources. The last section of this paper discusses potential ways to leverage the expected excess capacity.

Western Canada was for many years a major supplier to the UK. That has changed in recent years. Figure 9 below shows that Japan now gets about 2/3 of Canada’s exports. Canada’s total exports, shown as the shaded solid bars in the chart, have more or less remained flat (with a slight fall) for the last 8 years or so.

Some of the eastern Canadian pellet exporters face the UK induced demand shock as well. A bright spot there is that the full conversion of the 450 MW Belledune station by New Brunswick Power from coal to pellet fuel will take up some of the current production capacity.

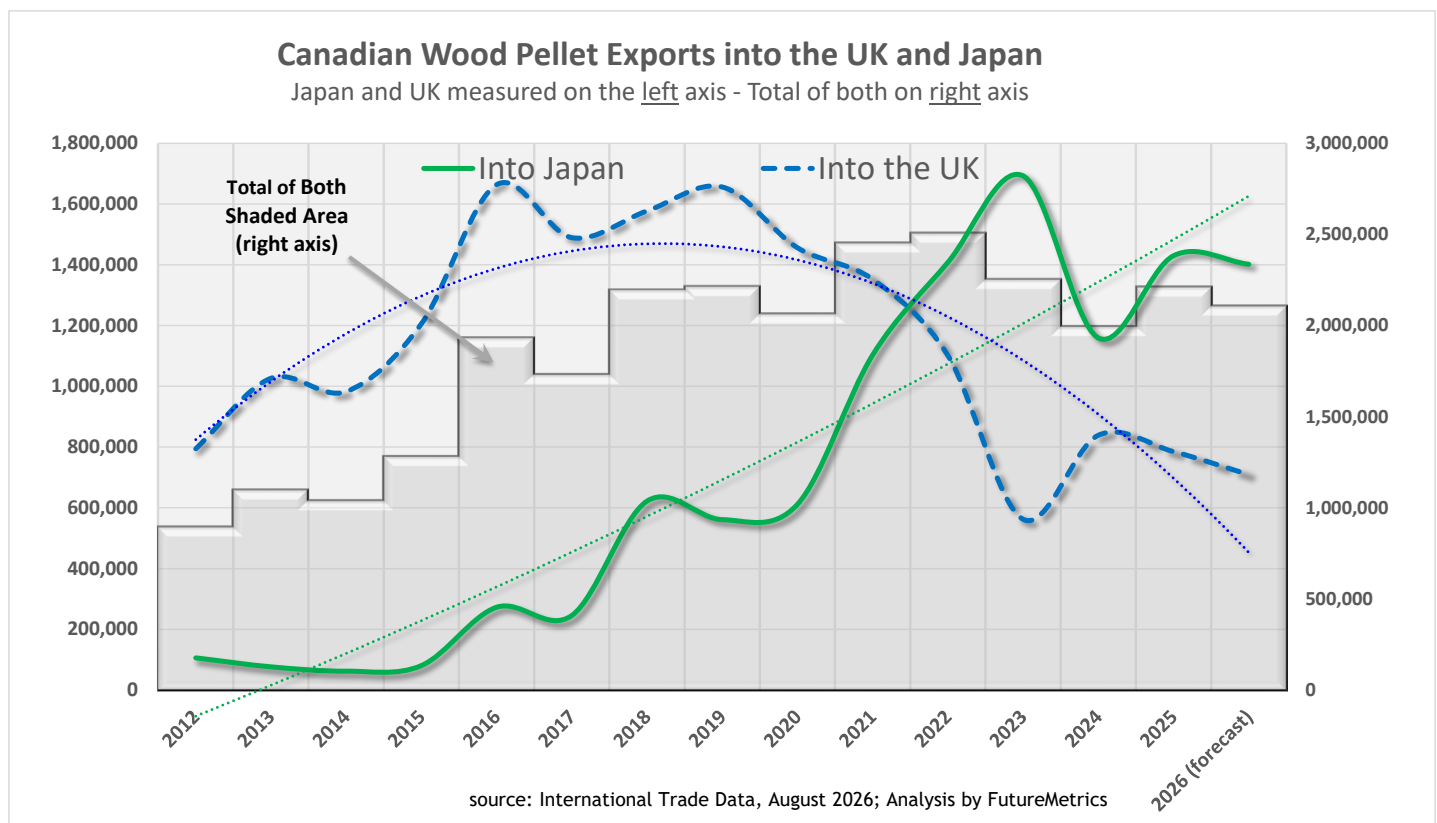


Figure 9 - Canadian Exports to Japan and UK

So far, this paper has mostly discussed the “ugly” and the “bad”. In the near term, unless there is a dramatic change in UK policy, the impact of the demand shock will be challenging¹. Some of the currently operating pellet fuel production plants that are less efficient and/or have higher input costs will likely be mothballed.

¹ There may be periods after March 2027 in the UK during which the Drax and Lynemouth stations will produce power that is not subsidized by the Bridge Policy. Argus publishes a “bark spread” that compares wholesale electricity prices with the calculated break-even cost of generating electricity from wood pellets. Argus also publishes the comparable break-even



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But don't jump out of any windows yet! There is a "good" story to be told. The export pellet supply chain benefits from several key advantages that can be the foundation of "what is next".

For starters, pellet producers are experts at aggregating diverse sources of residuals from the primary forest products industry² and converting them into a consistent homogeneous product³.

Traditionally this conversion process has been used to produce a coal replacement solid fuel. This is still a viable potential pathway forward. But for that pathway to remain open, or open wider (in the US for example), policy supporting decarbonization is necessary.

With policy that supports sufficient and durable value to avoiding net CO₂ emissions, strategies for bioenergy carbon capture and sequestration (BECCS) become viable. BECCS is both carbon negative and a supplier of baseload green power. FutureMetrics has produced several white papers on this topic.

Continuing to follow in the traditional use of fuel pellets, FutureMetrics has also produced papers on the value of converting existing coal fueled power stations to "white" pellets to supply datacenters with baseload green power.

But these projects do not come online overnight. Current US policy suggests that there will be no action on controlling carbon dioxide emissions in the near-term in the US. Nonetheless, some datacenter developers in the US may choose to purchase green baseload power and sell carbon credits.

But the major growth in demand in the future may not ride on fuel pellets. Fortunately, the skillset and infrastructure that converts diverse biomass sources into a homogenous product has value beyond fuel pellets.

generation cost for coal, including the cost of CO₂ emissions. The pellet break-even represents the power price required to cover pellet fuel costs at a specified generating efficiency. When the wholesale electricity price exceeds the pellet break-even generation cost, the bark spread is positive. Under these conditions, a biomass generator could operate on a merchant basis without Bridge Policy support and earn a positive fuel margin. High coal and carbon prices can contribute to this condition by raising the marginal cost of fossil-fuel generation and, consequently, wholesale electricity prices. A positive bark spread should not, however, be interpreted as demonstrating positive overall cash flow or profitability. The Argus break-even calculation primarily measures whether power revenues cover biomass fuel costs; it does not necessarily cover all operating, maintenance, capital and other costs associated with maintaining the generating station. Therefore, a positive bark spread indicates that unsubsidized generation may be economically attractive at the margin, rather than demonstrating that the plant could operate sustainably over the longer term without support. [Some of this footnote was edited by ChatGPT]

² The pellet producers use the leftovers from lumber production, the by-products of forest management (thinnings), and the parts of the final harvest that are unsuitable for sawmills, pulp and paper mills, and engineered wood products mills.

³ Sustainability is the foundation of the industry. The primary biomass resources for producing upgraded biomass derived product must be perpetually renewing. That is, the resource cannot be depleted. New growth has to equal or exceed removals. FutureMetrics has discussed this in detail in several white papers that are free to download from the [FutureMetrics website](https://www.futuremetrics.com).



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Two areas in which there are rapidly emerging markets with massive growth potential are the need for sustainable liquid fuels and the need to decarbonize the refining processes in the steel making sector. Both need carbon atoms that are not derived from coal, petroleum, or gas.

Dry wood contains 15% to 25% fixed carbon (depending on hardwood or softwood and ash content). Creating high carbon content output from biomass has a long history: charcoal is biocarbon. But efficiently, continuously, economically, and cleanly producing a consistent high carbon content product at scale requires careful design, engineering, and operations⁴.

For existing “white” fuel pellet factories, going a step farther in the conversion process to produce high carbon content product is more or less an add-on. The challenges of efficiently and economically aggregating inputs and preparing the materials for upgrading have already been solved. The logistics for distributing the product are fully developed.

If the experts take care of the front end of the supply chain, then end users such as SAF or MSF refiners, or blast furnaces or electric arc furnaces, need only to secure long-term offtake agreements with the already existing experts at delivering reliable and consistent products at a known cost. The refiners can do what they do best and leave front end supply headaches to those that already manage the biomass inputs and the logistics challenges of delivering the material to the end users.

What is Next?

If decarbonization remains in policy discussions, and, as the consequences of climate change become increasingly severe and more frequent, decarbonization will rise to the top as a critical strategic goal⁵. Then there is a very bright future for the wisdom gained and the infrastructure built by the fuel pellet export sector.

There is “good” down the road.

But there is still “ugly” just ahead!

The strategic planning for transition to “what is next” should be (and probably is) well under way inside the offices of major fuel pellet exporters. That planning should dovetail with policy that will motivate demand pull.

While US policy to motivate reductions in CO₂ emissions is missing for now, changes are underway elsewhere that are creating the necessary demand pull.

For example, as a recent FutureMetrics white paper discussed, demand growth for SAF and MSF is expected to require a massive buildout in refining capacity. Even US air carriers will need to abide by other countries SAF requirements if they fly into their airspace. Ships will need to decarbonize all over the world as they comply with

⁴ FutureMetrics has produced a comprehensive research study on thermal treatment technologies.

⁵ See the FutureMetrics’ May 9, 2026, white paper “Transitioning Off of Fossil Fuels - Stop pretending that business-as-usual is good” to read a discussion about motives for “de-fossilizing”.



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International Maritime Organization (IMO) requirements. This will require developing supply chains for the inputs to the SAF/MSF refining process that sustainably sourced biological carbon will play a critical role in satisfying.

Another example, also discussed in a FutureMetrics white paper, is the steel sector. The refining processes are major emitters of geologic CO₂. It is an industry with easy to measure emissions and therefore with easy to measure benefits from replacing coked coal with carbonized biomass produced from sustainable (and thus CO₂ neutral) sources.

An example of a more traditional use is BECCS. If, for example, as expected but still not certain, the UK produces a BECCS policy that will support the investments in BECCS needed by the two major pellet fueled power stations, then once the BECCS operations are fully operational, those stations will no longer need the support for power sales. They will, if this comes true in the right way, produce enough revenue from BECCS to sell power without subsidy. The stations will want to make as much biogenic CO₂ as possible (for capture and sequestration leading to sufficient revenue) and thus the stations will return to the top-end capacity factors at which they currently operate. The current high capacity factors will drop significantly after March 31, 2027.

The UK demand shock, starting April 2027 through 2028 (and probably longer), will likely be a transition period that poses real challenges to most existing pellet fuel exporters. Developing demand for biologic carbon from major liquid fuels refiners and major steel companies is critical. Developing demand for baseload green electrons from datacenters is critical.

The timing is critical not only for developing new end users to counter the fuel pellet market challenges, but it is critical in supporting the very front end of the woody biomass supply chain.

The traditional outlet for the majority of the residuals from sawmilling and the merchandising of the non-sawlog portions of the trees has been wood-using pulp mills. Between 2019 through July 2026, 31 pulp mills have closed in the US. About 20 million tons per year of pulp production disappeared between 2014 and 2025⁶. It takes 2.2 to 2.5 tonnes of green wood (50% moisture content) to make a tonne of pulp. Thus nearly 50,000,000 tonnes per year of residual wood demand was lost. There have been a few new builds, but they mostly use recycled paper rather than virgin wood chips. Net forest products residuals demand loss since 2014 is about 40 million tonnes per year⁷. And the trend is likely to continue. The loss of markets and thus value to forest landowners leads to land use change; and that results in a permanent loss of forest land.

The experts at converting the same residuals used in the pulp and paper sector into fuel pellets can step in and with relatively minor modifications to the exiting factories, produce the advanced upgraded products that SAF and

⁶ "Key factors driving wood-using pulp mill closures included (1) reduced demand for certain end products, such as newsprint and writing papers; (2) consumer preferences for recycled products and lighter weight packaging; and (3) increased efficiencies across the sector. In addition, new pulp mills in South America and Asia can, in cases, sell pulp cheaper than produced by U.S. mills." Source: Forisk, Market Pressures and Opportunities for the US Pulp and Paper Sector", August 27, 2026.

⁷ From National Alliance of Forest Owners (NAFO) via Claude.



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MSF refineries need as an input. Or they can make the biologic carbon reductants to replace the coal that is used now in iron ore and scrap steel refining.

The amazing growth in the fuel pellet export market started very small. The first bulk shipload of fuel pellets exported from north America to Europe was in 1998⁸ when the decarbonization of coal fueled generating stations was just beginning. That first load sent from the west coast of Canada to Sweden was about 15,000 tonnes. Today the equivalent of a 60,000-tonne Panamax shipload is crossing the oceans every day of the year.

The growth curve for biologic carbon based sustainable liquid fuels and steel refining reductants is just beginning now. It is starting small. But it will explode over the next decade.

Enduring the “ugly” next few years will be easier if the fuel pellet exporters can hitch a ride on that upward curve.

⁸ The pellets on that ship were produced at a pellet factory in Prince George, British Columbia that was owned and operated by John Swaan. John has been FutureMetrics’ operations specialist since 2013. Click [HERE](#) for a paper about John’s pioneering history in the pellet sector.