WHITE PAPER

US Foreign Trade Zones: Potentially turning tariff lemons into lemonade

Options for Electric-Assist Bicycles

By Raymond Verhelst

There are many challenges facing the development of emerging markets and businesses. For the electric-assist bicycle industry within the U.S., the key barrier seems to be legislative and regulatory obstacles limiting where these semi-powered bikes can be ridden. Then there is consumer awareness and the ability to explain the features and benefits to a population that grew up riding bikes as a youth but can't visualize the difference without actually riding one.

As this market gains traction within the state and local governments, and consumers have the chance to experience pedal-assist, electric bicycles, the sales horizon looks fairly bright.

But the newest challenge comes from the current administration in Washington D.C. who

recently compiled a list of more than 1300 Chinese export items, valued at more than $50 billion USD, which they intend to penalize with additional import duties. The proposed tariff will be an additional 25% tacked on to whatever import fees are already in place for these goods coming into the U.S. This pending action follows the already-in-place tariff of 25% on steel imports and 10% on raw aluminum placed against Mexico, Canada, and the EU.

Electric, pedal-assist bicycles are included in the proposed 301 action, which is currently seeking public comment from the office of the United States Trade Representative (USTR). Unique to the U.S. is the fact that completed pedal-assist electric bicycles do not have their own harmonized import code. To be specific, the World Customs Organization maintains the list of tariff codes that is a product-specific code documented in the Harmonized System. According to their description, tariff codes exist for almost every product that is involved in global commerce.

Electric, pedal-assist bicycles are grouped in with motorcycles (including mopeds) and cycles, fitted with an auxiliary motor, with or without a sidecar. The official HS code is 87.1160 and applies specifically to “completed” products operating with electric propulsion, not the pieces and parts associated with the eBike.

At present, the U.S. International Trade Commission (USITC) lists the general tariff of “FREE” for the code. But that could change quickly if the 301 action is approved, and 25% is a substantial jump.

Why Are Import Tariff Penalties Being Implemented Against China?

There are documented reports from numerous agencies that show the Chinese government subsidizes many products destined for export, often making the pricing unfairly low. A combination of lower wages, compounded with the general higher volume of production associated with the country’s economies of scale, can raise the competitive barrier for any other developed nation to match the net cost. Additionally, there are import hurdles applied to many U.S.-produced items seeking entry into China that currently are subject to significantly large import duties. In addition to the pricing challenges, there are issues with IP appropriation (don’t want to use the word theft). All of which has set the U.S. administration on a path to a potential trade skirmish.

In truth, this is both a political and economic move and will be countered by similar amounts of export penalties from the other side. To be fair, no one knows how long these proposed tariffs would remain in place. But for now, because of this potential financial pain, there comes an opportunity to re-evaluate on-shoring of U.S.-based manufacturing, substantial assembly, and JIT (Just-In-Time) business models that support e-commerce sales platforms.

As the title of the paper suggests, we will attempt to explain how US Foreign Trade Zones can actually help turn a lemon tariff situation into possible lemonade with a special focus on the emerging U.S. electric-assist bicycle market. To do this we are calling upon a number of industry-related associations and trade experts to evaluate the different scenarios.

Explanation of an FTZ within the US

According to the North America Foreign Trade Association, “Foreign-Trade Zones (FTZ) are secured, designated locations around the United States in or near a U.S. Customs Port of Entry where foreign and domestic merchandise is generally considered to be in international commerce and outside of US Customs territory. As a result, activated businesses in an FTZ can reduce or eliminate duty on imports and take advantage of other benefits to encourage foreign commerce within the United States.”

The concept of domestic FTZs came to be back in 1934 with the Foreign-Trade Zones Act. Data shows that in a 2014 Annual Report to Congress, the FTZ Board indicated there were more than 175 active FTZ programs happening around the country. These zones provide jobs for more than 420,000 people within 2700 companies and import more than $798 billion in shipments.

Acting as small commerce islands in the midst of major US cities and ports, these zones are often used for the substantial transformation of a series of imported items that are assembled into new products and assigned new Harmonized Codes. These products often benefit from inverted tariffs when all is said and done. The definition of an inverted tariff is when the finished goods are a result of blending products from multiple nations, including the U.S.; the integration of domestic labor, and potentially homegrown IP; to where the goods are assigned a new HC, which has its own import tariff percentage, that is equal to or less than the collective tariffs assigned to each individual part.

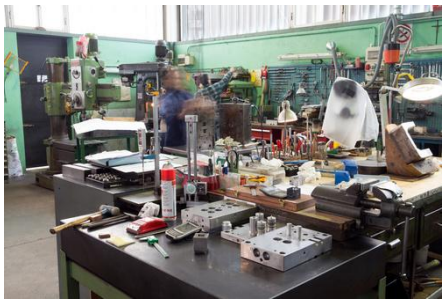
In some cases, an FTZ can play home to items not typically allowed for U.S.import. These items may end up being integrated into other finished products that are destined for export to a country that does not have an issue with the goods and can be transferred (or exported) from the FTZ as if the goods never touched U.S. soil.

Other examples have shown how companies have imported specialized machinery not normally licensed for use within the U.S. on a temporary basis to help in the initial prototype of

manufacturing and production of a final part or product. This temporary import use allows the company to avoid any customs, duties, or certifications on these side pieces of equipment. This includes metal forming and extrusion equipment, CNC cutting, drilling, and milling, as well as advanced 3D printing technologies. As long as the equipment sits within the zone, it has never resided within the U.S., and as long as items do not pose a health or safety risk, it can be used. Goods that enter an FTZ are not subject to a time limit.

Benefits & Limitations Within An FTZ

Few companies use space within an FTZ to simply store finished goods. Unless the import duties and tariffs are extreme, the cost benefits do not offer significant enough savings. An exception is where huge volumes of non-perishable goods can be brought in and staged for timed release as needed. This is different from a traditional Import Bonded warehouse. The FTZ Bond allows goods to stay indefinitely, whereas a temporary bond is only good for 6 months. The majority of the companies within the more than 175 zones around the US use their presence inside of the FTZ to manufacture or complete the final assembly of finished goods from a combination of individually imported pieces and parts.



As referenced before, the value of the reverse or inverted tariffs when assembled into a fully finished product can offer measurable savings. Often these savings provide a favorable offset when analyzed against using local labor and traditional U.S. business overhead.

Another potential savings associated with manufacturing has to do with imported product waste. Select items are charged a tariff by weight and if in the production process a significant amount of the material becomes waste, then only the actual “used” material is measured for the tariff. An example of this is a production line that makes cosmetics. They import volumes of plant-based goods to where the extraction is only an oil found within the flower. After the trimming, pressing, and purifying of the oil, 95% of the plant becomes waste and is not charged for.

Under our product focus, we know traditional adult bicycles are subject to an import tariff equal to 11%, yet the individual parts have tariffs that range from 3.9% to 10% (special cranks and gears, along with spokes). There are special country carve-outs that actually have agreements with the US to avoid all of these duties if the items are actually produced in these countries of origin, but we will not get into those details here.

There are cumulative savings on ocean shipping containers coming to the port that is destined for the FTZ facility. Currently, individual containers are charged a $450.00(+-) port fee for each. Shipped goods heading to an FTZ can be combined into weekly reports where there is only a single charge regardless of the number of containers earmarked for a single company running through the port on their way to the FTZ. If ten containers came through in the seven day period

of reporting time, as much as $4050.00 in fees could be saved. Additionally, Harbor Maintenance Fees can be paid quarterly instead of with each shipment. Fewer filings also reduce the individual brokerage fees. This benefit suggests planning, logistics, and coordination can improve the bottom line.

If time is an issue, goods sealed in their own full container (FCL) will bypass the traditional port customs inspection period as they are merely being transported to a remote customs facility, your FTZ. This is not to say customs is avoided. Local port inspectors conduct random drop-in visits to review all manifests and paperwork. However, the goods can typically arrive 2 to 3 days earlier using this method of delivery.

Tariff deferment is an important asset as the ability to delay paying any of the final import duties for the goods until such time as the products leave the FTZ and actually enter the US can really help with cash flow. Especially if we are talking about 500 to 1000 electric bikes. In the case of the proposed 25% tariff, imagine each bike had a wholesale value of $600.00 USD. The tariff on a typical shipment of 200 bikes in a single container would be $150 per bike or $30,000.00. From a cash flow perspective, this deferment can have a large impact on a company's bottom line.

Even goods currently subject to import anti-dumping penalties, such as aluminum, can see a benefit. Currently subject to a 10% penalty based on volume, a raw ingot coming from Canada, Mexico, or the EU can be brought into the FTZ, extruded, formed, bent and machined into bicycle frame parts. The material off-fall can be considered waste, collected, weighed and deducted from the initial import. The penalty is then divided up among the number of finished goods by the net weight and the payment due is deferred until the frames leave the FTZ.

An example might be that one cylindrical ingot of aluminum might be able to produce 50 frames and the off-fall equals 8% of the material. The payment of that 10% penalty will be based on the total weight, less the 8% waste and then divided into 50 equal parts, and only when those parts leave the FTZ, would they require payment.

Discussions on this topic will often cross over into a Customs Bonded Warehouse. An FTZ Bond covers all admissions into an FTZ and companies utilizing these zones have the flexibility to manufacture with these goods, whereas regulations require a Customs Bond for goods in a Bonded Warehouse and the items remain intact until they leave.

Both foreign and domestically produced items can be stored inside of an FTZ. This is especially important for manufacturing and assembly that might blend multi-sourced goods into a single

finished product. Only the foreign components will be subjected to any import duties or tariffs.

On the negative side, there are misconceptions that even with substantial labor, finishing, and modifications, these products will never transition enough to be called “Made in the USA” which would eliminate all tariffs. The closest designation would be “Assembled in America” or “Assembled in the USA from Foreign Parts”.

Additionally, FTZ’s cannot be utilized as a facility for retail or small quantity distribution. Export fees, customs processing, and brokerage fees will void out any savings when attempting to ship very small quantities directly from an FTZ.

Using The FTZ Network For Regional Distribution

With 175 different FTZ zones throughout the U.S., the ability to bring in volumes of goods into a centrally located assembly facility, to where the ultimate destination of the finished products is scheduled to be available for national distribution, there are opportunities for real savings. First, there is the reduced time from port to a facility. Secondly, a combination of manual and automated finishing, technical assembly, blending of pieces and parts from multiple origins, and final packaging can all be done with economies of scale if a longer-term needs projection is forecasted.

Once completed, containers can be reloaded and transferred to regional FTZ warehouses by truck or rail in the Northeast, Southeast, Midwest, or elsewhere in the U.S. and still remain under the FTZ bond. This allows goods to be staged closer to regional dealer networks for forecasted volume movement out of the zone and into a local distribution facility. Only then would the goods be subject to the import duties.

Importing, Assembly and Exporting Opportunities

Often, there are needs to combine foreign goods with items and assembly finishes supplied from domestic sources, but in the end, the completed assembly is destined for another country. An FTZ allows the import of all of the components into the factory space within the zone, which is used to assemble the combined set of international and domestic items into a substantially new product which may go through advanced finishing and packaging. In the end, the completed products can be shipped to another country and never be subjected to any additional U.S. export fees because as far as U.S. Customs is concerned, the original shipments never made it on to U.S. soil. The items would, however, be subject to the country of origin tariffs on the newly landed country port.

How is this beneficial? Products coming from one country on the way to their final destination port in another country that has better trade arrangements than similar goods coming from the U.S., can benefit from important value-adds provided by a U.S. operation. For example, if goods are shipped into a U.S. FTZ facility and the value-add is integrated into the product, placed back into the container and then shipped to the final foreign port, the final destination is never subject to U.S. export duties. Granted, the value of the add-ons needs to compete when balanced against the additional transportation and handling expense, but this model opens up global sales opportunities.

This is especially important for markets that are emerging in the U.S. but are strong elsewhere. An example would be bicycle components. Goods brought into the U.S. that have been subjected to significant changes to where the Harmonized Code has been changed may provide benefits to another nation. Extrusions, forming, fabrication, and patented electrical engineering are some examples. For electric bikes, lithium rechargeable battery packs with advanced battery management circuit boards, designed with the latest chip technology, could be assembled here, tested and certified and then shipped with both higher quality, as well as protected IP.

The Electric Bike Scenario

For a pedal-assist electric bicycle, more than 80% of the bike is made up of traditional bicycle parts, albeit, heavier duty. For North America, the proposed 25% import penalty is for fully constructed electric bicycles.

As pointed out, individual bicycle components have import tariffs that range from 3.9% to 10%, and there are exceptions from specific exporting countries to where these tariffs have been reduced to “0”. An example is many bicycle parts that come from KR (Korea) or SP (Singapore Special Trade) can enter for free. For electric motors up to 750 watts, the import tariff is currently 4% and lithium battery cells are subject to a 3.4% tariff.

Within an FTZ zone such as all of Clark County, in Southern Nevada, individual buildings can be established as subzones within the overall zone. Inside a building, there can be a designated area set aside as the FTZ manufacturing facility. It must be fully secured and enclosed with limited entry and exit points. Remember, this area falls under the jurisdiction of Customs Border Protection (CBP). There are fencing requirements, even for the spaces where trailers and containers might end up being stored. But adjacent to this secured area, can be a non-FTZ warehouse facility where goods can be transported. Even this slight movement is considered an export out of the FTZ and would then be subject to the export duties and tariffs.

The Clark County example is unique due to its size and flexibility. Usually, the zone is much smaller and can be a few square miles down to a select group of buildings.

A concept example is to receive all of the individual bicycle parts into the FTZ side and to facilitate some manufacturing and sub-assembly, leaving off the electric motor, controller, display, and battery. This option allows the bicycle to be fabricated to a fairly complete stage and prepared for transfer. The larger inventory could be held within the FTZ and only goods prepared for JIT volume distribution (a combination of monthly IBD deliveries and/or forecasted direct consumer shipments) would be transferred, along with the matching quantity of motors, batteries, and displays. Buying for 5,000 bicycles generates better volume pricing, but monthly shipments might be 200 to 500 units.

The non-FTZ side of the building, which officially resides in the U.S. would then install the motor and electrical components and finalize the packaging and preparation for shipment. While one could transport all of the pieces and parts to the U.S. side and facilitate the complete assembly, there are certain benefits when jobs are created within the zone.

This scenario charges the tariff designations to a bicycle at 11% and the motor and battery at 4 and 3.4% respectively. The collective difference remains at the maximum 11% because the net combined import price is equal to or less than a complete electric-assist bicycle imported from China. Granted, using U.S. labor and the business and operational expenses must all be factored into final overhead, but the penalty reduction is 14% off of a finished electric bicycle based on the proposed tariff penalty.

Another enterprising example of blending public and private sector cooperation to create new economic opportunities comes from Portugal. Using the regional government policies and incentives created around the Agueda and Porto regions in Portugal, they have turned the country into the third largest bicycle producer in the EU. The subsidized manufacturing center has developed advanced aluminum frame fabrication supported by high levels of automation and carbon fiber component production. As a result, a number of vertical manufacturers are joining in with foreign companies establishing assembly centers.

This concept has not been lost on states in the U.S. that invested in renewable energy, alternative transport development, and advanced materials manufacturing.

Nevada is especially interested due to their groundbreaking commitment to support Tesla and Panasonic, who jointly have constructed the world's largest lithium cell manufacturing center. The state also happens to be the only one in the nation with an active lithium mining operation.

Additional Side Benefits

Specialty equipment used for any production line that typically would be subject to formal customs entry procedures can avoid formal entry documents while inside an FTZ manufacturing center. In many cases, international equipment manufacturers are interested in showcasing their products in a working environment yet without the traditional temporary export bond. Within an FTZ, an entire automation line can be established with prototype equipment, used to both produce actual finished goods as well as demonstrate to potential customers.

Important Business Considerations

Considering the fact that the majority of mainland Chinese bicycle manufacturers have zero corporate presence in North America, their product liability insurance may state that it extends globally but no U.S. underwriter will accept their coverage. No one wants to end up fighting a claim in a Chinese court. Therefore, expect that the importer will be considered the manufacturer of record and will pay significantly for this coverage. So whether you buy and resell or do the final subassembly, the company is considered the builder, period.

Also, consider that lithium battery transport safety certification (UNDOT38.3) requires that both the individual cells used in the pack as well as the entire pack with the BMS circuitry must pass the seven different durability tests. This is not required in China to transport lithium batteries so they don't automatically include this safety certificate with each U.S. order. This most often means that the importer is required to underwrite the significant testing expense or at least a portion of the cost.

Penalties for attempting to ship battery packs of this size without it can literally put a company out of business.

State and County Support

As mentioned, all of Clark County, Nevada is considered FTZ #89. In total, there are 175 FTZ designated zones around the U.S. State and County level Economic Development agencies are constantly looking for industry diversification that offers job creation with steady employment, economic growth in unique manufacturing sectors, and industries that have a global presence as opposed to just local or regional markets.

Depending on the focus of the region, these agencies offer a number of different incentives to get new businesses as well as existing businesses to establish themselves or expand within their community. Business licensing, tax abatements, equipment sales tax deferments, employee job training wage subsidies, and other resources are often available if the plan meets the department's objectives.

FTZs can help with cash flow

In most cases, few Chinese operations offer extended terms for their sales. This is especially true when orders barely meet the minimum requirements. In the electric bicycle market, we need only look at the annual production of more than 37 million electric-assist bicycles on China's mainland and one can understand where an order for 500, 1000, even 5000 units might fall. Yet for an emerging market where 300,000 to 400,000 annual unit sales is the current target, parts orders in the U.S. need to meet specific thresholds for additional consideration. With that said, every dollar earmarked for advance payment prior to any sales commitment is a direct hit against operational cash flow.

If frame finishing, battery pack construction, and bike final assembly aren't in your plans, there are still the benefits of deferment. If an importer/distributor buys three ocean containers of 200 electric-assist bicycles in each, besides the net cost of goods, there are shipping charges, port charges, and customs duties and tariffs. If the bikes are subject to a 25% import tariff penalty, the ability to defer this along with some of the port fees provides immediate relief.

Freight Cost Reductions

Shipping Container Entries (No FTZ) -
5 individual entries in 1 week $485.00 x 5 = $2,425.00 plus freight forwarding and bond fees for each. The payment is due upon arrival, or potentially 30 days if you have an existing set of terms with your freight forwarder.

Entries Into An FTZ -
5 individual entries in 1 week heading to an FTZ are considered one, collective shipment so the payment would be $485.00 plus reduced "forwarder" handling fees, the bond is part of the FTZ annual license and port fees are paid quarterly.

Immediate savings = $1,940.00

Freight Import Duty Deferment

Freight Import Duty with proposed penalty (No FTZ) -
1000 complete electric bicycles at a value of $600.00 each (200 units per container) would be subject to the 25% tariff = $150,000.00 and be due immediately.

Transport into an Activated FTZ -
The complete electric-assist bikes would be subject to the same Import Duty and proposed penalty but the percentage per unit will only become due when the goods leave the FTZ. Disbursement is divided up into smaller bulk shipments out of the FTZ, which means the $150,000.00 is divided up over time, providing flexible cash flow. Most importantly, the payments are only made when goods ship against dealer or customer orders.

Immediate Cash Flow benefit = $150,000.00

On-Shoring Option

If the combination of finishing automation, advanced trained domestic labor, and reduced delivery times to retailers and consumers adds value to the product, then this could be well worth it. Additionally, purchasing the bicycle in parts will provide minimal cost savings on Chinese labor but typically reduces the number of ocean containers and transport fees.

For the same 1000 bicycles, if delivered in parts, reduces the per unit cost $525.00, giving you a small U.S. labor subsidy of $75.00. Then if a company assembles the bike less the motor, controller, and battery and the product is brought into the U.S. as traditional bicycles, the savings against the proposed tariff would be 11% ($57.75 per unit) or a $92.25 savings which amounts to $92,250.00 in savings. This savings, along with the labor subsidy of $7,500.00 for the 1000 bicycles, could be applied to the U.S. labor and operation costs.

If the dollar is strong, and the combination of foreign parts blended with some U.S. technologies is of value to an EU customer, the business question poses “might there be an option to manufacturer at a higher volume for more than just a domestic market and ship goods from the FTZ to other nation’s without the additional tariff burdens applied from the U.S.?”

These are just some of the important questions entrepreneurial business owners need to ask their banking and accounting advisors.

Getting set up in an FTZ

To be clear, there are application fees, annual licensing fees, and select consulting fees involved in helping a company to get through the submission and approval process. Expedited services are available but you can expect to pay a premium to get both the FTZ warehousing and manufacturing licenses. Then there will be the added expense to secure your rental building with fencing, security equipment, and the proper computer software that will manage all of your inbound and outbound freight. This is especially important as CBP/U.S. Customs will do random spot checks and will access the computer to review all of the shipments against their own manifest reports.

Picking your location is equally important. Here are some considerations:

1. **Being close to the inbound port -** Considering the majority of the goods are coming from China, the natural port is Long Beach, California. Another benefit for the Southern Nevada location is the convenient proximity to the port but at 40% of the cost of operating a business in Southern California.
2. **Networked into the national highway and rail system -** It is critical that if you intend to move freight out of the FTZ in bulk, you will need quick access to the national highway grid for truck transport and reasonable access to rail freight. These two multimodal methods will allow you to move goods around the country and to an eastern port for exporting to Europe.
3. **Competitive business and labor costs -** Regardless of the location you select for the FTZ, make sure the overall business expenses and labor costs are in line with your

budget, which will be dictated by the selling price and margins of the products you are producing.

4. **Willingness of support from the State and Local government -** This is critical in determining your actual start-up costs. Tax and licensing deferments can help get the operation off the ground quicker. If the program involves engineering, advanced machine operation, and technical assembly, then you need to work with the state's labor agencies to develop a supporting job training program. States offer wage subsidies to help build a trained and qualified workforce.

Conclusions

Taking on the endeavor of a licensed and active FTZ business is not for an electric bike company that is projected sales under 1500 units annually. It doesn't make sense. Other than temporary cash flow improvement, you need to be looking at monthly sales of 300 units per to see a real benefit. You also need to believe that products that have received the benefits of U.S. labor, finishing technology, and included liability protections will be worth a slight increase in pricing to accommodate all of the above. Would "Assembled in America" create stronger relationships with your dealers and/or consumers? You also need to look realistically as to whether there are distribution channels outside of the domestic U.S. where a greater volume of specific parts, either fully produced in the U.S. or improved through higher quality assembly and the infusion of improved IP would matter.

Assuming you can meet those criteria and that you have found a strategic place with an FTZ to establish your business venture, you must start the process. There is a capital expense, combined with some governmental red tape, to get the facility within the zone approved and this selection might require a balancing act between the final facility selection and the necessary site approval.

You can't do this yourself. You will need to work with your state and local economic development partners and you will most likely need to bring on an FTZ consulting specialist who have some connections to help navigate the application through the process.

You will need to evaluate each and every component you intend to import and determine not only where it might come from to provide the lowest tariffs, but is it potentially possible that you could manufacture this yourself. You will also need to evaluate whether the manufacturing technology you deploy might create a valuable product for international export. This helps to create a larger sales territory, which in turn allows the adjustment to the potential manufacturing volume you project.

Will being in a position to assemble, possibly custom finish, and prep for shipping in 7 days make a difference to a dealer or consumer? Does the JIT model change the business equation? Could this support a larger e-commerce model?

About The Author

Raymond Verhelst is the principle behind Verhelst Associates, which is based in Las Vegas, Nevada. Personally, he has more than 30 years in face-2-face marketing, business development, technical operations, engineering and manufacturing logistics.

Mr. Verhelst has been involved with the Nevada Governor's Office of Economic Development and has been part of an official delegation traveling the world to promote the benefits of manufacturing in Foreign Trade Zones.

He is a recognized speaker in the North American electric bicycle industry, and a published author of books within the trade show industry and papers on lithium battery technology.

Verhelst Associates is available to help interested companies navigate the current waters involved in establishing a manufacturing presence in a US FTZ.

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Resources:

- U.S. Department of Commerce/U.S. Commercial Service, Fresno, California, Glen Roberts, Director
- National Association of Foreign-Trade Zones - Washington, D.C. - Erik Autor, President
- United States Customs and Border Protection, a division of Homeland Security, Washington, D.C.
- Port of Seattle Washington - Foreign Trade Zone #5