

Taiwan's Carbon Fee Era -

The Future of the Fastener Industry (Part II)



Editor's Note: The EU carbon market and carbon tax calculation are closely related to Taiwan's industries and their future competitiveness. In the last Nov. issue of Fastener World Bimonthly Edition, we've explained in detail the future carbon tax collection model, calculation criteria and implementation progress in Taiwan. In order for readers to better understand the issues and impacts that may arise from the actual implementation of the carbon tax, and to maintain their competitiveness in the global market in the future, we have provided more in-depth explanations and analyses in this issue.

The EU Emission Trading System (EU ETS) established by the EU in 2005 is the most mature operation in the world and currently the world's largest carbon emissions trading market. **Currently, the price in the EU carbon trading market is about EUR 70 (about NTD 2,500), which is 8.33 times higher than the carbon fee in Taiwan, which means that from 2026 onwards, importers in the EU will have to pay the difference between the carbon fee that Taiwanese fastener exporters have paid to the Taiwanese government and the EU CBAM tax to the EU government.**

The weights and amounts of screws, bolts, nuts, automotive screws, screw hooks, rivets, pins, cotter pins, washers (incl. spring washers) and similar articles (HS code: 7318) made of iron and steel exported from Taiwan to the world, the U.S., and Europe (incl. EU and non-EU countries) in 2019-2023 are summarized in **Table 1** (Taiwan's Steel Fasteners Exports in 2019-2023).

The total weight of Taiwan's exports to Europe in 2023 was 399,901 metric tons. Based on my assistance to Taiwanese fastener manufacturers in reporting the carbon emissions of CBAM-related products in the past two years, the total emission was about 3.15 metric tons of CO₂e/ton, meaning the calculated carbon emission of CBAM declaration in 2023 was 1,259,688.15 metric tons of CO₂e. After conversion, the amount of CBAM tax to be paid (one metric ton is NTD 2,500) is NTD 3,149,220, 375, equivalent to 98,413,000 US dollars, which means that **European importers have to pay a CBAM tax of around 6.76% of the imported value.**

In the past two years, due to the war between Russia and Ukraine, the energy costs in Europe have risen dramatically, the European economy has declined, and the price of EU ETS has dropped from the highest point of €100 to the current €70. In my past article titled "The Impact of EU CBAM on Taiwanese Fastener Industry" in Fastener World Magazine (Issue #190) in 2021, my calculation found that CBAM at that time amounted to about 8.51% of the export amount. Based on the two variables (i.e., the unit price and the EU ETS price), **it is estimated that the CBAM tax that EU importers will have to pay to the EU government for Taiwanese fasteners will be about 6-8% of the export value after deducting the carbon fee that Taiwan has already paid.**



Table 1. Taiwan's Steel Fasteners (HS code 7318) Exports in 2019-2023

Region	2019		2020		2021		2022		2023	
	Value (1,000 USD)	Weight (Ton)	Value (1,000 USD)	Weight (Ton)	Value (1,000 USD)	Weight (Ton)	Value (1,000 USD)	Weight (Ton)	Value (1,000 USD)	Weight (Ton)
World	4,316,160	1,479,292	3,968,861	1,363,250	5,319,169	1,610,698	6,140,351	1,607,481	4,599,738	1,230,933
USA	1,751,784	621,962	1,689,805	609,132	2,249,900	699,425	2,747,335	715,366	2,016,249	555,152
Europe	1,427,529	508,335	1,234,038	435,469	1,718,308	548,998	1,946,438	553,915	1,455,643	399,901

Table 1 shows that Taiwan sold 1,230,933 metric tons of steel fasteners to the world in 2023, with a total value of US\$4,599,738,000, among which 399,901 metric tons of these products were sold to Europe in 2023, with a total value of US\$1,455,643,000. The weight of exports to Europe accounted for 32.49% of Taiwan's total export weight, while the value of exports to Europe accounted for 31.65% of Taiwan's total export value. Based on these data, Taiwanese fastener industry may face two difficulties, one of which is that after the carbon fee is levied in Taiwan, the cost of Taiwan CSC will increase by about 0.45% to 2.73%. The amount of Taiwan's carbon fee is far from the EU's target (a difference of 8.33 times). EU importers have to bear the CBAM carbon tax about 6-8% of the total imported value. It will take time to see if Taiwanese fastener companies can still maintain their competitiveness in the EU market. Secondly, once Taiwan's carbon fee starts to be charged, the carbon fee, if reflected in the selling price of Taiwan's CSC's wire rod, will make Taiwanese fastener products less competitive in the non-EU regions. Since Europe accounts for 32.49% of Taiwan's total fastener exports, 67.51% of the rest of the world (including the U.S.) have not begun to levy a carbon tax, but still have to bear the impact of increased carbon tax costs, especially in the U.S. where the Clean Competition Act (CCA) was originally scheduled to be introduced in 2024 and has been delayed due to serious inflation in the U.S. in 2023 and the presidential election in 2024. After assessing Trump's election as the next U.S. President and in view of the fact that Trump, who was then the U.S. President in 2019, led the U.S. to withdraw from the Paris Agreement, it is predicted that the U.S. CCA will continue to be delayed. As a result, it requires observing whether the increased costs of the carbon fee levied in Taiwan will reduce the international competitiveness of Taiwanese fasteners in the U.S. and non-EU regions.

Under these two difficulties, **the carbon reduction performance of Taiwan CSC is the key to determining the future of Taiwanese fastener industry.** In the calculation of CBAM carbon emissions of steel fasteners, Taiwan CSC's wire rod accounts for about 70% of the emissions; and therefore, in order to effectively reduce the carbon emissions of Taiwan's steel fasteners, in addition to the efforts of the downstream processing plants, **it is also necessary to actively reduce carbon emissions from the steel billet smelting in Taiwan CSC.** At present, the most urgent task is that **Taiwanese fastener industry should help Taiwan CSC in the name of public associations to obtain the most government budget for energy saving and carbon reduction to improve its production process and accelerate the carbon reduction process of Taiwan CSC,** and even help it secure the same amount of funding that Taiwan CSC received for the construction of the plant in 1971 (which was one of the ten major projects of Mr. Chiang Ching-Kuo, the then Premier of the Executive Yuan) in order to quickly enhance the capacity of Taiwan CSC to reduce carbon emission and increase capacity.

On the other hand, on April 1, 2024, Taiwan Power Company adjusted its electricity tariffs across the board, which varied according to different types and levels of electricity consumption, with the rate of increase ranging from 3-10% for people's livelihood, and 7-25% for industrial use. On October 16, 2024, Taiwan's Ministry of Economic Affairs (MOEA) announced the second tariff increase within the year, with the electricity tariff for industrial use going up by 12.5%, however, for industries with declining electricity consumption or production value, the rate of increase will be frozen or reduced by half. It is an indisputable fact that Taiwanese fastener industry experienced a decline in production value from 2023 to 2024, so **Taiwanese fastener industry should quickly and actively apply for a freeze or a 50% reduction in the rate of increase in the name of the company or trade association.**

Taiwan CSC was established in 1971. At that time, in order to prevent dependence on foreign steel products, reduce the burden of foreign exchange, and eliminate the shortcomings of the past due to the inconsistency of the source of steel, which made it impossible to control the quality, Taiwan CSC built a large steel mill, which accelerated the economic and social development at that time, and made a significant contribution to Taiwan's economic miracle. Over the past 50 years, Taiwanese fastener industry has not only earned the reputation of "Kingdom of Fasteners", but has also provided the livelihoods of countless families in Taiwan. Whether or not Taiwanese fastener industry will have another 50 years of prosperity will ultimately depend on the carbon reduction performance of Taiwan CSC's production operations. ■

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