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| FOR | : | Customers |
| SUBJECT | : | Prices variation report 2023 |
| DATE | : | 02-Jan-2023 |
| PERFORMED BY | : | TAMA INGENIEROS S.A.C. |

The purpose of this report is to describe and contextualize the evolution of prices of the main raw materials and consumables for steel transformation, as well as the financial costs that explain the increases in fabrication prices for 2023, as well as the risks and recommendations for TAMA's Customers.

Introduction

Growth prospects for global economic activity have been declining due to the effects of restrictive monetary policy in the main world economies, the impact of inflation on consumption, slower growth in China, and international conflicts. This has caused inflation in Peru to reach its highest levels in the last ten years in 2022, driven by higher fuel and fertilizer prices, which in turn originated in the conflict between Russia and Ukraine and the embargo on Russian oil exports. However, inflation not only impacted the fuel and food categories, but also the rest of the consumption basket of individuals and the production costs of companies. These increases have forced the Central Reserve Bank of Peru (BCRP) to increase the benchmark interest rates in order to keep inflation under control, which in turn translates into higher financing costs. Likewise, uncertainty, business distrust and social conflicts caused a lower dynamism of primary activities such as mining production in 2022. All these factors have impacted TAMA's production cost structure, from raw materials and consumables to labor and energy costs, including a significant increase in financial costs, as described below.

1. Evolution of raw material prices

Throughout 2022 there was a downward trend in the price of steel plate raw material (MP). Thus, between January and December the price of ASTM A36 steel plate purchased by TAMA decreased by 15% from US\$ 1.25 to US\$ 1.06/kg. In general, this downward trend also correlates with that of the St. Louis Federal Reserve's cold-rolled plate price index (FRED) in the US. [1] which reported a drop of up to 48% in the Jan-Nov period (Figure 1). On the steel profiles side, the behavior was mixed in terms of rises and falls, so for example, in the case of ASTM A36 "C" carcasses as of November the purchase price increased by 16% from US\$ 1.15 to US\$ 1.34/kg registering a peak in April (US\$ 1.44/kg), in line with the FRED cold rolled profiles price index [2] which also closed up +2% reporting a mid-year peak, as shown in Figure 2.

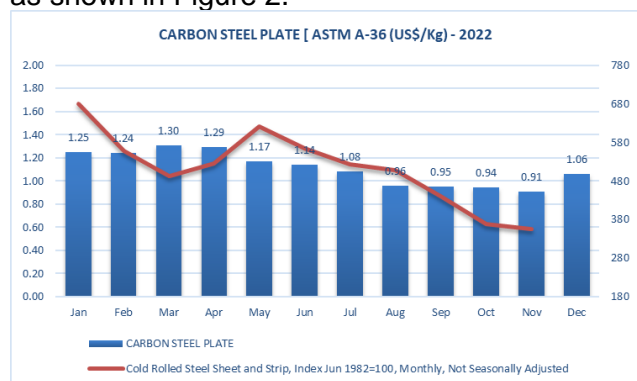


Fig. 1. A36 carbon steel plate price evolution

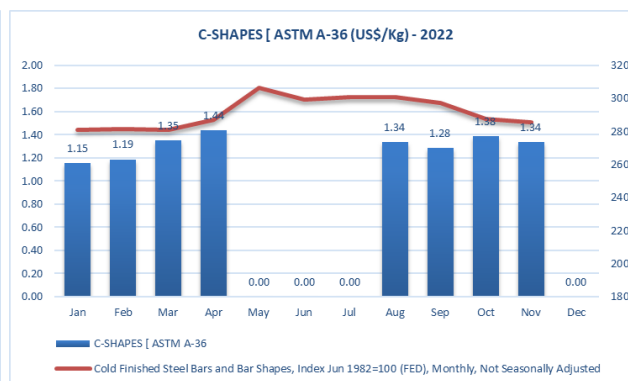


Fig. 2. A36 C - shapes price evolution

2. Consumable prices evolution

As for consumables that are also used in a significant proportion either directly or indirectly for steel transformation, the following describes the behavior of local prices for paint, welding, fuel, personal

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protective equipment (PPE), solvents, gases, abrasives and packaging materials.

Coatings. As shown in Figures 3 and 4, in 2022 the purchase price of epoxy coating rose from US\$ 37.00 to US\$ 49.73/gal (+34%) and that of thinner increased by 30% from US\$ 14.89 to US\$ 18.84/gal.

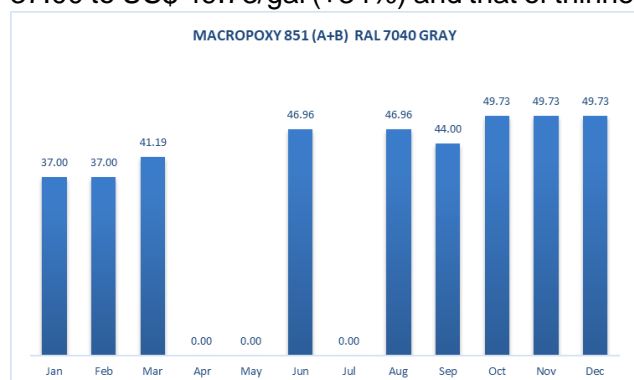


Fig. 3. Epoxy coating price evolution (US\$/Gal)

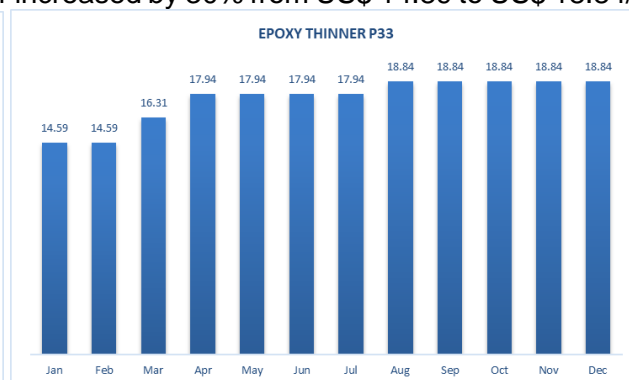


Fig. 4. Epoxy thinner price evolution (US\$/Gal)

Welding. Welding consumables increased by 21%, starting the year at US\$2.65 and remaining at US\$3.20/kg for the rest of 2022, as shown in Figure 5.

Oil. Regarding the evolution of the B2 diesel oil price, in December 2022 an increase of up to S/. 3.70/gal (+29%) was registered with respect to January. This increase is even higher than that reported as variation of the consumer price index (CPI) of fuels reported by INEI in November 2022. [3], as shown in Figure 6.

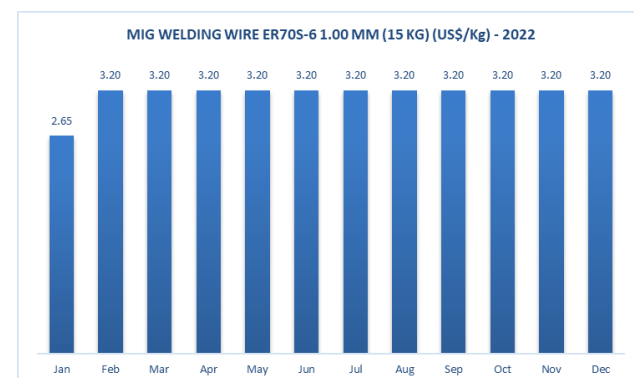


Fig. 5. Welding wire price evolution.

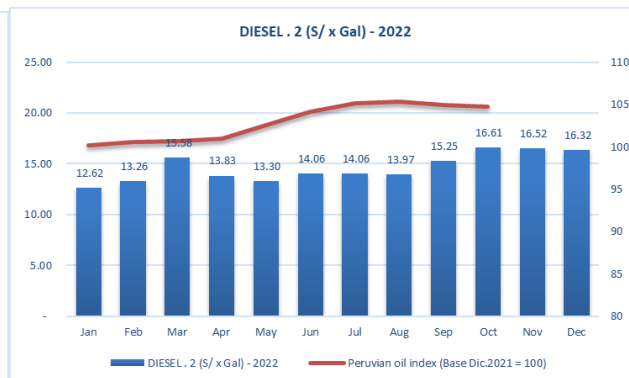


Fig. 6. Diesel price evolution.

Other consumables. Table 1 shows the evolution of the prices of thinner, gases, abrasives and wood for packaging, where the increases of 25% in industrial oxygen, +9% in cutting discs, and 7.7% in wooden pallets.

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| Description | Jan | Feb | Sea | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Year change (%) |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| Thinner | | | | | | | | | | | | | |
| INDUSTRIAL ACRYLIC THINNER CYLINDER X 55GL (S/) | 18.81 | 18.81 | 18.81 | 18.81 | 18.81 | 18.81 | 18.81 | - | 18.81 | 18.81 | 18.81 | - | 0.0% |
| Gases | | | | | | | | | | | | | |
| INDURMIG 80% ARG. + 20% CO2 X BOTTLE 11.487 M3 (S/) | 13.65 | 13.65 | 13.65 | 13.65 | 13.65 | 13.65 | 14.20 | 14.20 | 14.20 | 14.20 | 14.20 | 14.20 | 4.0% |
| INDUSTRIAL OXYGEN X BOTTLE 10.537 M3 (S/) | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 25.0% |
| Abrasives | | | | | | | | | | | | | |
| CUT-OFF WHEEL Ø4 1/2" X 2.5MM TY19 - TYROLIT (US\$) | 0.89 | 0.89 | 0.89 | 0.89 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 9.0% |
| GRINDING DISC Ø7" X 7MM TY10 - TYROLIT (US\$) | 2.84 | 2.84 | 2.84 | 2.84 | 3.11 | 3.11 | 3.11 | 3.11 | 3.11 | 3.11 | 3.11 | 3.11 | 9.5% |
| Wood for packaging | | | | | | | | | | | | | |
| OAK WOOD 3" X 4" X 10' (S/) | 43.00 | 43.00 | 43.00 | 43.00 | 43.05 | 43.05 | 43.05 | 43.05 | 43.00 | 43.00 | 43.00 | - | 0.0% |
| WOODEN PALLET 1300 MM X1100 MM (S/) | 13.00 | - | 13.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | - | 7.7% |

Table 1. Evolution of purchase prices of various consumables.

Personal protective equipment and work clothes. In 2022, prices in local PPE market also had a mixed performance, highlighting in Table 2 the increases in products such as leather gloves (+20%), safety shoes (+4%) and imported respirator filters (+10.5%). On the other hand, earplugs and safety glasses reduced their prices by 17.3% and 32.8%, respectively. On the side work clothes, increases have vary between 7.5% and 11.9% in relation to 2021.

| Description | Jan | Feb | Sea | Apr | May | Jun | Jul | Aug | Set | Oct | Nov | Dec | Annual change(%) |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------|
| Personal protective equipment | | | | | | | | | | | | | |
| STEEL-PRO BOX EARPLUGS (S/) | | 1.10 | 0.95 | 0.94 | 0.94 | 0.95 | 1.40 | 1.20 | 1.20 | 1.20 | 0.91 | | -17.3% |
| REINFORCED LEATHER GLOVES W/YELLOW SIZE "9" (S/) | 14.00 | 14.00 | 14.00 | 15.00 | 15.00 | 15.00 | 15.00 | 16.80 | 16.80 | | | | 20.0% |
| INDUSTRIAL SAFETY SHOES S44(S/) | 53.20 | 53.20 | | | 53.20 | 53.20 | | | 55.33 | | | 55.33 | 4.0% |
| FILTER F200CP3 AIR SAFETY (S/) | | | 21.90 | 21.90 | 21.90 | 21.90 | 21.90 | 21.90 | 21.90 | 22.20 | 24.20 | | 10.5% |
| GX10 CLEAR SAFETY GLASSES(S/) | 4.00 | 3.00 | 3.00 | 2.25 | 3.00 | 3.00 | 3.00 | 3.30 | 3.30 | 3.00 | 2.69 | | -32.8% |
| Work clothes | | | | | | | | | | | | | |
| MEN'S NAVY BLUE JEAN WORK SHIRT (S/) | 45.60 | | | | | 49.00 | | | | | 49.00 | | 7.5% |
| JEANS PANTS #14 OUNCES BLUE WITH WHITE PRINT (S/) | 37.70 | | | | | 42.20 | | | | | 42.20 | | 11.9% |
| COTTON JERSEY POLO SHIRT 20/1 NET COLLAR. COLOR BLUEPRINTED - LONG SLEEVE (S/) | 21.40 | | | | | 23.10 | | | | | 23.10 | | 7.9% |

Table 2. Evolution of purchase prices of PPE and work clothes.

3. Energy cost evolution

In 2022, there was a significant increase in the price of electricity. The items related to off-peak energy consumption (S/ kW.h), on-peak generation power (S/ kW), and off-peak excess power (S/ kW) -which have the greatest impact on TAMA's electricity cost structure- increased between January and November by +19.6%, +0.5% and +41.6%, respectively, as shown in Figure 7.

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





| Concept | Jan | Jun | Nov | Var % | Trend |
|--|--------|--------|--------|-------|---|
| Energy consumption during peak hours (S/ kW.h) | 0.3221 | 0.3489 | 0.3792 | 17.7% |  |
| Off-peak energy consumption (S/ kW.h) | 0.2714 | 0.299 | 0.3246 | 19.6% |  |
| Reactive energy consumption (S/ kVar.h) | 0.1118 | | 0.1154 | 3.2% | |
| Inductive reactive power consumption (S/ kVar.h) | 0.0559 | 0.0519 | 0.0577 | 3.2% |  |
| Distribution power peak hours (S/ kW.h) | 10.11 | 10.391 | 14.39 | 42.3% |  |
| Generation power peak hours (S/ kW) | 68.06 | 63.5 | 68.369 | 0.5% |  |
| Excess off-peak power (S/ kW) | 10.94 | 11.247 | 15.496 | 41.6% |  |

Fig. 7. Evolution of electricity rates

Source: Luz del Sur [4]

4. Financial expenses

The financial cost of bank loans for working capital and factoring type financing with the main Clients also increased. In December, the BCRP increased to 7.5% the monetary policy reference rate due to the 12-month inflation rate increasing from 8.28% in October to 8.45% in November, which in turn was caused by the significant increase in international energy and food prices since 2021, and international conflicts. As shown in Figure 8, between January and December 2022 the benchmark interest rate increased by 150%. This agency projects a declining trend in year-on-year inflation to 4.4% in the fourth quarter of 2023 [5].

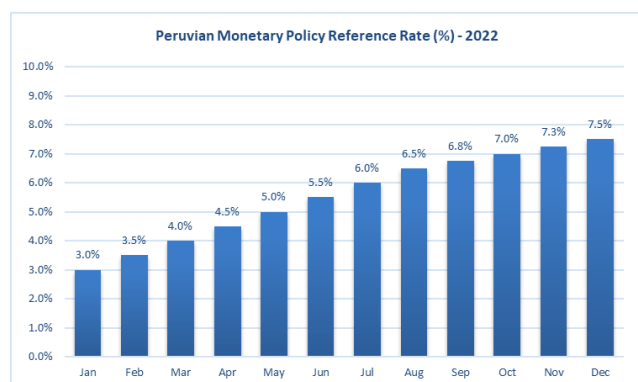


Fig. 8. Evolution of the BCRP reference interest rate.

Source: BCRP [6]

Table 3 summarizes the evolution of financing costs under the factoring modality between 2021 and 2022, where increases of up to 582% are observed in the effective annual interest rates (EAI) that banks charge TAMA in exchange for the advance payment date of invoices issued on credit, which vary between 60 and 120 days of payment. Thus, at the end of 2021 the different EAIs faced by TAMA ranged from 0.87% to 9.85%. By December 2022 this range increased to 1.53% to 12.65%.

Similarly, working capital financing costs and letter of guarantee issuance fees increased by 46% and 16%, respectively.

For example, at the end of 2022, for every US\$ 100,000 invoiced to client "Fff", the bank "V" discounts TAMA US\$ 2,889.33 due to interest and charges, which means that TAMA receives, in effective terms, 3.03% less than the value of the invoice for advancing payment by approximately 176 days. Until 2021, for this same invoice negotiated at an interest rate of 0.87%, US\$ 422.60 was discounted, thus multiplying the cost of this factoring financing by 5.82x.

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| CUSTOMER | PAYMENT TERM | BANK | CURRENCY | Effective Annual Interest Rate – (%) | | | | | | | | Interest for every \$1,00K or \$100K | Bank fees | Net amount to be received (\$/ or \$) | Effective Financial Cost (%) |
|----------|--------------|------|--------------|--------------------------------------|--------|--------|--------|--------|--------|---------------------|------------|--------------------------------------|-------------|---------------------------------------|------------------------------|
| | | | | 2021 | Jul-22 | Sep-22 | Oct-22 | Nov-22 | Dic-22 | Var. 2021 vs 2022 % | | | | | |
| Sss | 90 | B | US\$ (T.E.A) | 5.66 | 4.58 | 4.58 | 8.20 | 8.60 | 8.60 | 51.94% | 1,996.50 | \$ 0 | \$98,003.50 | 2.04% | |
| Aaa | 120 | B | US\$ (T.E.A) | 3.13 | 3.33 | 4.53 | 5.25 | 6.25 | 6.92 | 121.09% | 2,169.31 | \$ 0 | \$97,830.69 | 2.22% | |
| Mmm | 90 | V | US\$ (T.E.A) | 5.00 | | 5.00 | 5.25 | 7.00 | 7.22 | 44.40% | \$1,689.65 | \$ 1.00 | \$98,309.35 | 1.72% | |
| Vvv | 90 | S | US\$ (T.E.A) | 4.96 | | | 4.59 | 5.85 | 6.02 | 21.37% | \$1,418.80 | \$ 2.36 | \$98,578.84 | 1.44% | |
| Fff | 180 | V | US\$ (LIBOR) | 0.87 | | | 5.77 | 5.77 | 5.91 | 582.84% | \$2,889.33 | \$ 47.00 | \$97,063.67 | 3.03% | |
| Uuu | 60 | C | US\$ | 1.25 | | | 1.53 | 1.53 | 1.53 | 22.24% | 1,530.00 | \$ 25.00 | \$98,445.00 | 1.58% | |

Note: Bank fees are charged for each invoice paid. In the case of foreign payments, it includes charges from both the originating bank and the local bank.

Table 3. Evolution of financial costs and expenses.

From the information shown in Figure 8 and Table 3, it is possible to observe that there are factoring financing rates that have increased at a higher rate than the reference interest rate (582% vs. 150%). The projections do not rule out that the BCRP will continue to raise its benchmark interest rate, despite the slowdown in activity until mid-2023, when inflation will be in a frank decline, according to BBVA. [7].

5. Labor and inflation

In May 2022, the Peruvian government increased the minimum living wage (RMV) from S/ 930 to S/ 1,025 (+10.2%, see Figure 9), which also obliged formal companies to increase items such as Family Allowance (10% of the RMV: S/ 102.50).

On the other hand, the Consumer Price Index (CPI) in Metropolitan Lima continues to increase at the end of 2022. Thus, the accumulated variation for the eleven months of 2022 was 7.60%, higher than the behavior of 2021, 2020 and 2019 (5.60%, 1.92% and 1.68% respectively). Similarly, the annual variation corresponding to the period December 2021 - November 2022, was 8.45%, noting that the trend over the last 12 months, since the month of May remains at a level higher than 8.00% (Figure 10).

In line with both increases, and in order to maintain the quality of life of its workers, TAMA increased its salaries in July 2022 and will increase them again in January 2023, with which other labor items are also increased (contributions to ESSALUD, AFP, ONP, night work, life insurance law, etc.).



Fig. 9. Evolution of the minimum living wage.

Source: BCRP [8]

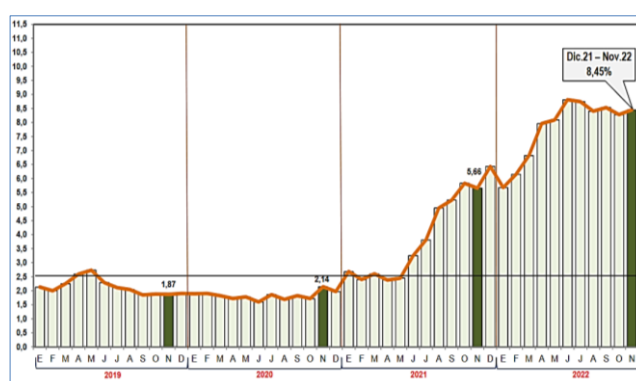


Fig. 10. CPI variation in Metropolitan Lima: 2019-2022.

Source: INEI (2022) [9]

It shall be noted that the increase in the RMV also has a direct impact on the cost of general services such as security and surveillance, and inflation also has an impact on the cost of services such as occupational medical examinations, environmental and occupational monitoring, fire extinguishers maintenance and other services for a formal company.

6. Risks by 2023.

According to BBVA Research [7] the main external risks are that inflationary pressures will require further increases in interest rates, leading the world economy to a significant slowdown. Similarly, an eventual deterioration of the war in Ukraine and other geopolitical tensions are also latent external

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risks. At the local level, the main risks are the more complicated political environment, resulting in measures affecting competitiveness (including the absence of personnel due to transportation problems, riots, or common crime issues), absences due to Covid-19 virus outbreaks, increased social conflicts, fertilizer shortages affecting food production and inflation, and credit rating deterioration, further weakening the environment for doing business. Additionally, after ending 2022 between S/ 3.85 and S/ 3.95 per USD, the exchange rate is projected to increase in the range of S/4.00 to S/ 4.10 per USD in 2023 and 2024. Therefore, further price increases of TAMA's fabrications during the next year are not ruled out.

Another almost confirmed factor is the increase in the cost of energy, since more than 50% of the national supply is energy generated by hydroelectric sources and 2023 will be a low water level year, so the trend of increase will continue (see Figure 11).

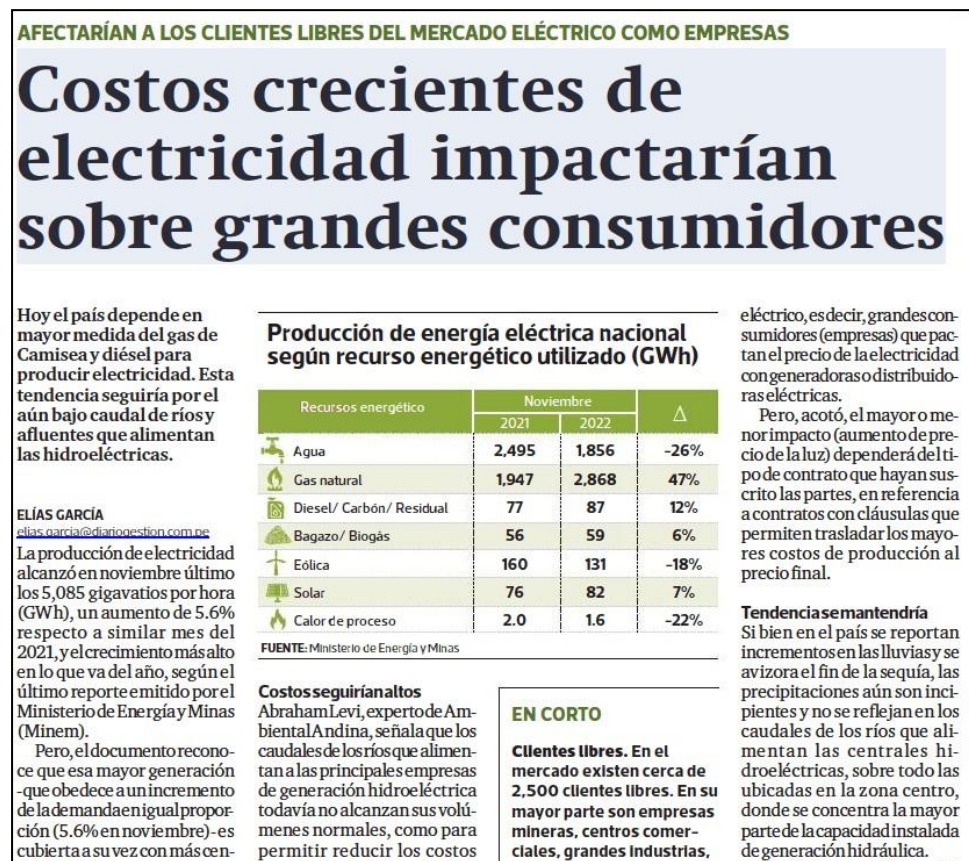


Fig. 11. Increasing trend in electricity costs to 2023.

Source: Gestión news (December 27, 2022) [10]

7. Recommendations.

In order to reduce the impact on sales prices, TAMA recommends to its customers:

- Consolidate your orders, as this helps to reduce waste of consumables such as paint and packaging as is often the case for smaller orders such as spare parts weighing less than 500 kg.
- It is also proposed that our Customers evaluate the possibility of developing annual manufacturing contracts, with guaranteed consumption quantities that allow better planning of the workload and optimization of resources with respect to eventual purchases.
- To review and monitor with its financial entities the factoring rates charged to its suppliers in order to ensure that they vary reasonably with the BCRP reference rates, as well as the payment terms and thus reduce the impact that these expenses cause on the sales prices of the products and the consequent deterioration of its competitiveness towards the final customer.

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