ÜNLÜ & Co

*13 August 2025*

# Astor

## Amping up growth

- **Market leadership underpinned by capacity expansion and export growth:** Astor Enerji is Turkey's largest and most profitable transformer and switchgear manufacturer, combining market leadership with strong growth and high margins. The company has outperformed peers with rapid revenue expansion at 31% CAGR between 2019-24 and best-in-class profitability, supported by vertical integration and long-standing client relationships with TEIAS, distribution companies and industrial customers. Ongoing investments in transformer lines, conductor production and a new switchgear plant will significantly increase capacity from 4Q25 onwards, enabling continued growth in both domestic and export markets, where Astor already serves over 100 countries. We expect 9.8% compound revenue growth and 30% average EBITDA margin in the period between 2025-34.

- **Domestic grid growth and replacement needs to drive transformer demand:** Turkey's transformer demand will grow with 5% CAGR over the next decade as rising peak load, grid expansion and replacement of aging assets increase annual capacity needs. Replacement accounts for most volumes at 70% of the total demand, providing a stable base, while new demand is driven by electrification and industrial growth. Astor's integrated setup positions it to capture this domestic market expansion despite rising competition.

- **Global supply tightness creates export opportunity for Astor:** Global transformer supply remains structurally tight as electrification, renewables and new industrial loads drive demand while capacity additions are slow due to material and labor constraints. Lead times for large units often exceed three years in developed markets, keeping utilization and pricing power high. Europe faces similar shortages, with grid modernization and renewable integration plans outpacing local manufacturing capacity. Turkish producers have gained share in EU imports, rising to 5.5 percent by 2024. Astor, with growing export scale, integrated production and capacity expansion, is positioned to capture incremental demand, particularly in power transformers for European grid reinforcement.

- **Potential Opportunities with Material Upside:** The following opportunities are not included in our valuation but could materially increase Astor's revenues if realized.

  US (+18TL/sh): The US transformer market faces chronic shortages with long lead times and limited domestic production. Astor plans to serve initial demand through exports and is evaluating local production. UL certification is essential for the sale of distribution transformers to public utilities, energy transmission and distribution companies.

  Syria (+6TL/sh): Reconstruction needs for transformers and substations are valued at USD9–12bn. If Astor secures 5–10 percent share, cumulative revenues could reach USD450m to USD1.2bn, but realization depends on political stability and donor funding.

  Ukraine (+4TL/sh): Grid restoration requires USD47bn of investment, with USD12–14bn likely for transformers and substations. A 3–5 percent share could yield USD175–500m over 5–7 years, though execution risk remains high.

- **Initiate at Buy with a target price of TL213/s:** Our valuation of Astor, which is based on average of multiple-based approach and a discounted cash flow analysis, yields a target price of TL213/share, implying 97% upside, thus we initiate coverage at Buy.

- **Key risks:** macroeconomic risk, competition risk, execution and expansion risk, supply chain risk.

Recommendation: **BUY** Initiation

Target Price: **213**

* Stock ratings are relative to the relevant country benchmark.[1] Target price is for 12 months
Produced by: UNLU & CO

| Share data | |
|---|---|
| RIC | ASTOR.IS |
| Sector | Electrical Equipment |
| Price (12 Aug 2025) | TL 108.10 |
| Market cap. (TLm) | 107,884 |
| Enterprise value (TLm) | 101,147 |
| Market cap. (USDm) | 2,655 |
| Enterprise value (USDm) | 2,489 |
| Avg. daily trade value (USDm) | 25.01 |
| Free float (%) | 28 |

**Price relative to BIST 100**


| Historical performance relative to BIST 100 (%) | | | |
|---|---|---|---|
| Performance over | 1M | 3M | 12M |
| Absolute (%) | 15.6 | 1.1 | 40.5 |
| Relative (%) | 9.3 | -10.0 | 26.0 |

Source: Rasyonet, UNLU & Co

The price relative chart measures performance against the Turkey BIST 100 which closed at 10,955 on 12 Aug 2025.


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Initiating coverage

Equity Research | CEEMEA/Turkey

| Financials in USD terms | | | | | | |
|---|---|---|---|---|---|---|
| **Valuation metrics[1]** | **2022A** | **2023A** | **2024A** | **2025E** | **2026E** | **2027E** |
| P/E (x) | | 16.9 | 20.0 | 11.8 | 9.1 | 8.5 |
| EV/EBITDA (x) | | 13.3 | 10.6 | 9.4 | 7.1 | 5.9 |
| EV/sales (x) | | 4.6 | 3.5 | 2.9 | 2.2 | 1.9 |
| Dividend yield (%) | | 1.4 | 1.3 | 1.8 | 7.1 | 7.9 |

| **Ratio analysis** | **2022A** | **2023A** | **2024A** | **2025E** | **2026E** | **2027E** |
|---|---|---|---|---|---|---|
| ROE (headline basis) (%) | 47.6 | 40.4 | 30.9 | 41.8 | 38.5 | 33.2 |
| ROIC (EBIT basis) (%) | 27.2 | 29.4 | 31.7 | 29.1 | 29.7 | 28.3 |
| Gross margin (%) | 30.4 | 38.3 | 34.6 | 32.0 | 32.1 | 32.4 |
| EBITDA margin (%) | 26.2 | 34.3 | 31.7 | 29.7 | 29.6 | 29.9 |
| EBIT margin (%) | 25.3 | 32.4 | 28.4 | 26.0 | 26.4 | 26.7 |
| Net margin (%) | 22.4 | 27.2 | 17.6 | 24.5 | 24.4 | 23.1 |
| Net debt/EBITDA (x) | 0.4 | -0.1 | -0.4 | -0.3 | -0.7 | -0.8 |

| **Profit and loss (USDm)[1]** | **2022A** | **2023A** | **2024A** | **2025E** | **2026E** | **2027E** |
|---|---|---|---|---|---|---|
| Revenue | 468 | 575 | 755 | 915 | 1,188 | 1,345 |
| *Growth (y/y)* | *32%* | *23%* | *31%* | *21%* | *30%* | *13%* |
| Gross profit | 142 | 220 | 261 | 292 | 382 | 435 |
| EBITDA | 123 | 197 | 239 | 272 | 352 | 401 |
| *Growth (y/y)* | 30% | 60% | 21% | 14% | 29% | 14% |
| EBIT | 118 | 186 | 214 | 237 | 313 | 359 |
| *Growth (y/y)* | 36% | 57% | 15% | 11% | 32% | 15% |
| Other income/expense | 6 | 1 | -14 | 48 | 58 | 48 |
| Financial income/expense & monetary gain/loss | -12 | 15 | 30 | 62 | 30 | 43 |
| Profit before tax | 113 | 178 | 177 | 299 | 386 | 414 |
| Tax | -8 | -22 | -44 | -75 | -97 | -103 |
| *Effective tax rate* | *7.3%* | *12.1%* | *25.0%* | *25.0%* | *25.0%* | *25.0%* |
| Minorities | 0 | 0 | 0 | 0 | 0 | 0 |
| Net income | 105 | 156 | 133 | 225 | 290 | 310 |
| *Growth (y/y)* | 81% | 49% | -15% | 69% | 29% | 7% |
| Weighted number of shares (m) | 998 | 998 | 998 | 998 | 998 | 998 |
| *Earnings per share (EPS) (USD)* | 0.10 | 0.16 | 0.13 | 0.22 | 0.29 | 0.31 |
| *Dividend per share (DPS) (USD)[1]* | 0.02 | 0.04 | 0.04 | 0.05 | 0.19 | 0.21 |
| *Dividend pay-out ratio* | 17% | 24% | 27% | 21% | 65% | 67% |
| USD/TL close | 18.7 | 29.4 | 35.3 | 42.8 | 51.3 | 59.0 |
| USD/TL average | 16.6 | 23.7 | 32.8 | 39.3 | 48.2 | 55.2 |

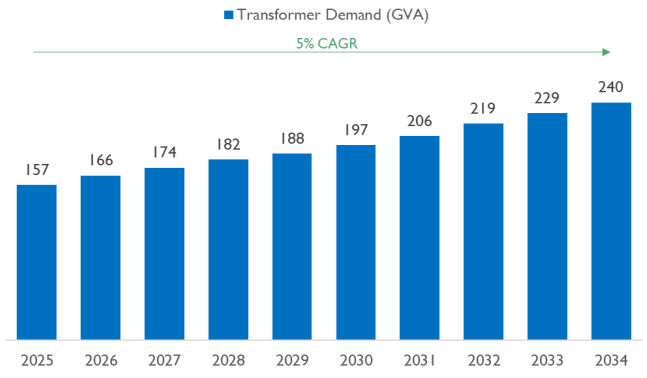
| **Cash flow (USDm)** | **2024A** | **2025E** | **2026E** | **2027E** |
|---|---|---|---|---|
| EBIT | 214 | 237 | 313 | 359 |
| Depreciation and amortization | 24 | 35 | 39 | 42 |
| Change in working capital | 5 | -19 | 79 | 46 |
| Taxes paid | -44 | -59 | -78 | -90 |
| Total capex | -105 | -112 | -40 | -40 |
| Capex/revenues | *-13.9%* | *-12.2%* | *-3.4%* | *-3.0%* |
| **Free cash flow** | **85** | **120** | **155** | **226** |
| Free cash flow margin | *11.2%* | *13.1%* | *13.1%* | *16.8%* |
| | | | | |
| Dividends paid | -37 | -35 | -47 | -189 |
| **Net inc. (dec.) in net debt (USDm)** | **75** | **-28** | **153** | **68** |

| **Balance sheet (USDm)** | **2024A** | **2025E** | **2026E** | **2027E** |
|---|---|---|---|---|
| Cash | 132 | 104 | 258 | 325 |
| Total current assets | 599 | 585 | 864 | 1,011 |
| Tangible/Intangible fixed assets | 161 | 238 | 239 | 237 |
| Total non-current assets | 267 | 327 | 331 | 331 |
| **Total assets** | **718** | **913** | **1,195** | **1,342** |
| Current liabilities | 273 | 280 | 319 | 345 |
| Total non-current liabilities | 2 | 1 | 1 | 1 |
| Total ordinary shareholders equity | 442 | 631 | 874 | 996 |
| **Total equity and liability** | **718** | **913** | **1,195** | **1,342** |
| Net working capital | 193 | 173 | 252 | 298 |
| Net cash (debt) | 104 | 82 | 240 | 312 |

Source: Company data, UNLU & CO estimates. [1]Financials for 2022-2024 are adjusted according to IAS29 accounting. USD-denominated financials for these years are divided by 2023-2024 end USD/TL. From 2024 onward, our estimates rely directly on the USD/TL closing rate.

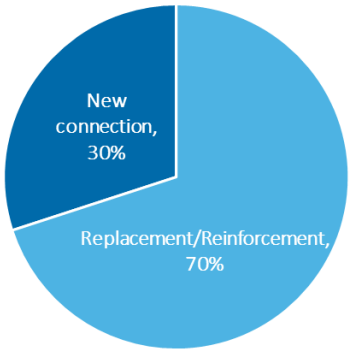
# Astor at a glance

**Figure 1: Transformer demand**



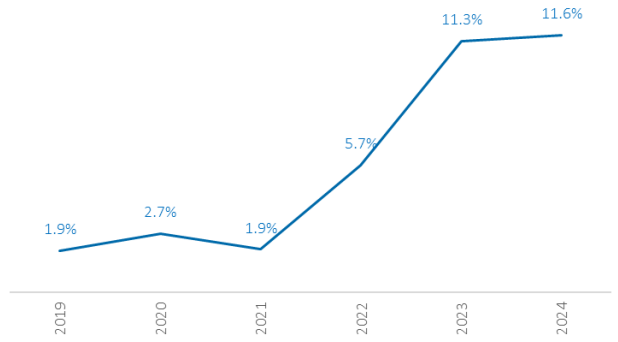

Source: TEIAS, EPDK, UNLU & Co Research

**Figure 2: Demand breakdown**



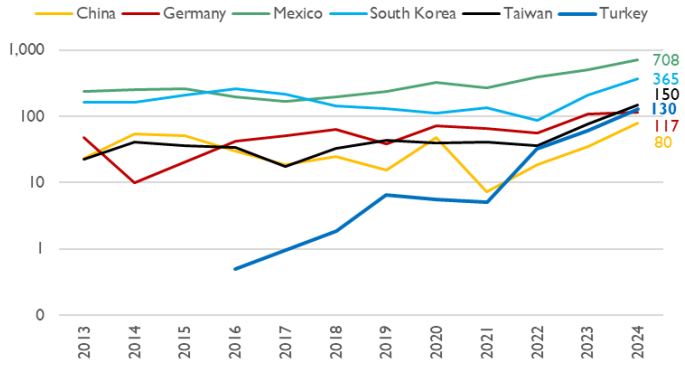

Source: TEIAS, EPDK, UNLU & Co Research

**Figure 3: Astor's share in Turkey's EU exports**



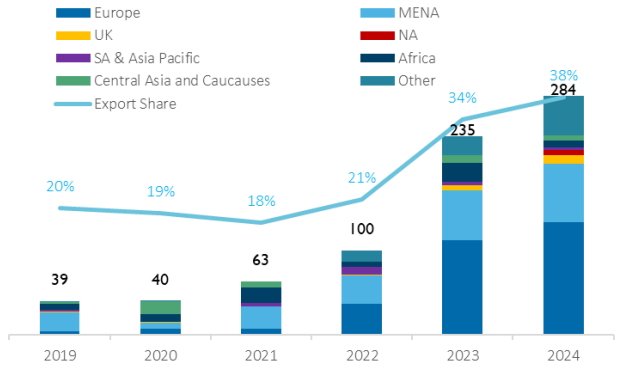

Source: Company data, Eurostat, UNLU & Co Research

**Figure 4: : Large Power Transformers Imports of US (Log scale)**



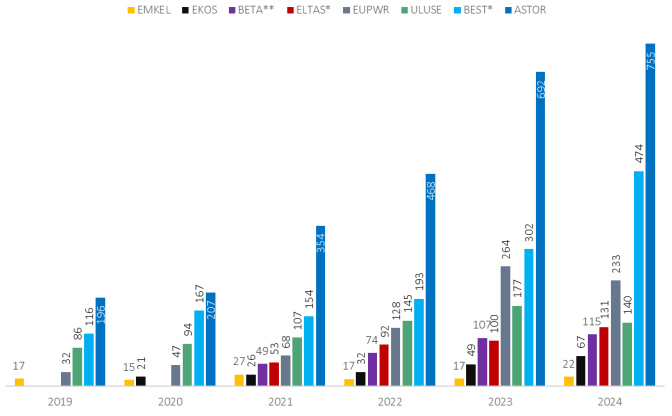

Source: USITC DataWeb - U.S. Department of Commerce, UNLU & Co Research

**Figure 5: Astor's exports**




Source: Company data, ÜNLÜ & Co estimates

**Figure 6: Local peer revenues (USDm)**




Source: Company data, Unlu & Co Research, *Based on disclosures on ISO500 and ISO Second 500 lists. **2021-2023 data from prospectus, 2024 extrapolated from ISO disclosures

# Executive Summary

## Market leadership underpinned by capacity expansion and export growth

Astor Enerji is Turkey's largest and most profitable transformer and switchgear manufacturer, combining market leadership (35% in 2023) with strong growth and high margins. Between 2019 and 2024, the company delivered a USD-denominated revenue CAGR of around 31% and achieved an adjusted EBITDA margin of low thirty percents, outperforming European peers such as Siemens, ABB and Schneider, which typically report mid-teens revenue CAGRs and EBITDA margins in the mid-20s. This superior performance is supported by vertical integration and long-standing relationships with TEIAS, distribution companies and industrial clients. Over the forecast horizon, we expect Astor Enerji to deliver compound annual growth of approximately 10 percent across revenue, EBITDA, and net income. This growth is anticipated to be supported by capacity expansion, continued strength in both domestic and export demand, and the company's vertically integrated production model. Margins are expected to remain broadly stable over the period, reflecting Astor's ability to manage input costs and maintain pricing power despite increasing competition and potential changes in market dynamics. Ongoing investments in transformer lines, conductor production and a new switchgear plant will increase capacity from 4Q25, enabling sustained growth in both domestic and export markets, where Astor already serves over 100 countries.

## Domestic grid growth and replacement needs to drive transformer demand

Turkey's transformer market is set to expand structurally over the coming decade, driven by rising peak electricity demand, continuous grid development, and the scheduled replacement of aging infrastructure. Based on our internal modeling and forecasts, transformer demand is expected to rise from approximately 157k MVA in 2025 to over 240k MVA annually by 2034, at 5% CAGR, reflecting both the physical expansion of the network and a sustained cycle of asset renewal.

Peak demand growth from economic development, industrial expansion and electrification of transport and heating is the main structural driver of transformer demand. Renewable generation does not directly increase peak load but changes grid topology by creating more distributed injection points, requiring tighter voltage control and more medium voltage transformation nodes. This leads to a broader mix of transformer specifications, particularly in medium voltage. Demand is also supported by recurring replacement of aging units, failures and extreme weather damage. Many transformers installed during Turkey's grid expansion in the 1990s and early 2000s are now reaching the end of their service life. Replacement demand forms a dominant share of total demand, around two thirds, which is higher than industry norms. This reflects both end of life retirements and proactive replacements aimed at reducing losses and improving efficiency. Industrial users often replace units before technical end of life, with new transformers paying back through lower losses in three to four years. The high share of replacement ensures a stable demand base and reduces dependence on new capacity additions.

Transformer demand growth is reinforced by proportional increases in adjacent product categories such as switchgear, protection devices and other medium and high voltage equipment. As an integrated producer of transformers and switchgear, Astor is positioned to benefit from this convergence. Turkey's future grid will require more transformation points to accommodate rising electricity demand and more distributed generation. This implies an increasing number of transformers across all voltage classes, driven by both new capacity additions and ongoing replacement cycles. For Astor this environment provides sustained volume growth potential in its

core transformer segment, supported by demand from utilities, industry and infrastructure. Competitors are expanding production capacity in response to this trend, which could create pricing pressure. Astor intends to mitigate these effects by using its vertically integrated production capabilities, including new inverter production and in-house copper and aluminum processing, to secure cost and supply chain advantages.

### Global supply tightness creates export opportunity for Astor

The global transformer market remains supply constrained as structural demand growth coincides with systemic bottlenecks in materials, labor, and manufacturing capacity. Electrification, grid decentralization, renewable buildout, data center expansion, and EV infrastructure rollout have accelerated demand. In the US, NREL projects a 260 percent rise in distribution transformer requirements by 2050, while IEA forecasts renewables will account for nearly all new power capacity additions through 2026. Supply issues worsened during the COVID period but stem from decades of underinvestment and consolidation in developed markets. The US Department of Energy reports that more than 85 percent of large power transformers are imported, with domestic production limited by labor and material shortages. Delivery lead times now exceed three years for high capacity units, with some quotes reaching five years. Material constraints, particularly in grain oriented electrical steel and copper, remain unresolved, and regulatory delays have slowed capacity additions in the US and EU.

This environment is unlikely to improve before the late 2020s. Transformers are low volume, highly specified products with long production cycles and limited standardization. New manufacturing capacity requires significant capital and skilled labor, both in short supply. The result is elevated capacity utilization rates, long lead times, and sustained pricing power for established manufacturers.

Astor's ongoing capacity expansion and vertical integration in copper and aluminum processing, positions it to benefit from export demand as buyers diversify procurement toward suppliers with shorter delivery times and flexible production slots. High entry barriers and stringent standards in developed markets limit competition, allowing Astor to capture incremental volumes in a high price, high utilization cycle.

### Europe

Europe faces simultaneous replacement demand from aging post war electrical infrastructure and new investment needs driven by decarbonization targets, rapid renewable deployment and new industrial loads such as data centers and EV charging. The European Commission's 2023 Action Plan for Grids highlights severe supply bottlenecks for transformers, with lead times for high voltage units extending in some cases to 2032. Shortages of skilled labor and rising costs further delay grid reinforcement. Total grid investment needs are estimated at EUR584bn by 2030, with EUR 375 to 425 billion required for distribution networks alone.

Turkish manufacturers have increased their EU market share from 1.6 percent in 2013 to 5.5 percent in 2024, with gains mainly at the expense of other exporters excluding China. Turkey's share of non-Chinese imports has risen to 12.6 percent, supported by geographical proximity, competitive labor costs and growing production scale. This has allowed Turkish producers to move from low voltage products into higher value segments including power transformers and medium voltage switchgear.

In Q1 2025, Astor's exports accounted for 54 percent of revenues compared with 45 percent a year earlier, with Europe representing 48.3 percent of total exports. Its backlog stood at USD517m, 65 percent from export orders and 80 percent from

power transformers. Ongoing capacity expansion in Ankara, including new core production and in-house conductor manufacturing, is intended to increase production flexibility and reduce external supply constraints. European manufacturers facing their own capacity limits have approached Astor for supply cooperation, positioning the company as a potential partner for future projects linked to Europe's energy transition.

## Potential Businesses

*The following opportunities are not included in our valuation but could materially increase Astor's valuation if realized.*

## US

Based on our forecasts, Astor's US operations could reach revenues of USD50m in 2026 and grow to USD255m by 2034, with EBITDA rising from USD15m to USD80m over the same period. Applying our valuation assumptions, this business could add an equity value of approximately USD350m, corresponding to around TL18/sh. These figures represent the potential upside from the US market if Astor successfully captures market share in the large power transformer segment.

## Syria

Around 25 to 30 percent of Syria's 35 to 40 billion dollars in infrastructure damage relates to transformers and substations, implying a 9 to 12 billion dollar market over five to ten years. Assuming a 5 to 10 percent share, Astor could generate 450 to 1.2 billion dollars cumulatively, or 45 to 120 million dollars annually. Early orders could match its Iraq revenues of about 100 million dollars per year. Applying a 50 percent risk discount, the NPV is USD125m, corresponding to around TL6/sh. Realization depends on political stabilization, donor funding and Astor securing contracts.

## Ukraine

We estimate 25 to 30 percent of Ukraine's grid restoration budget will go to transformers, substations and control systems, implying a 12 to 14 billion dollar market. While China supplies over 80 percent of Ukraine's transformer imports, EU alignment and donor procurement diversification could create openings for alternative suppliers. Assuming Astor secures 3 to 5 percent of this market, cumulative revenues would be 175 to 500 million dollars over 5 to 7 years, likely front loaded as urgent tenders target key grid nodes. Applying a 40 percent risk discount consistent with World Bank post crisis benchmarks, the NPV of this opportunity is USD83m, corresponding to around TL4/sh contingent on political stabilization, funding flows and contract awards.

# Valuation

We used a blended valuation model, assigning 60% weight to discounted cash flow analysis and 40% to peer comparison. Our USD-based DCF valuation is based on a 10-year forecast period and a 4% terminal growth rate. Inputs to our c.10.5% WACC estimate are 7.5% risk-free-rate, 6.0% equity risk premium and 1.0 Beta. We included EBITDA without any adjustments. In peer comparison analysis, we employed the target value derived from peer median of 14.6x 2026 EV/EBITDA with a 10% discount. We include EV charging stations as total investment value, and a discounted NPV of solar power plants. Our DCF analysis points to a USD3,872m market value, while our multiple analysis implies USD4,961m. Thus, we came up with **a target price of TL213/share**.

**Figure 7: Valuation**

| Valuation | Value (USDm) | Weight | Weighted Value |
|---|---|---|---|
| DCF | 3,872 | 60% | 2,323 |
| Peer Comparison | 4,961 | 40% | 1,984 |
| Blended 12M Target Mcap - USD | | | 4,308 |
| USD/TL (1Y FW) | | | 49.45 |
| Blended 12M Target Mcap - TL | | | 213,010 |
| Number of Shares (m) | | | 998 |
| 12M Target Price - (TL) | | | 213 |
| Current Price | | | 108.1 |
| **Upside Potential** | | | **97%** |

Source: UNLU & Co estimates

# Risks

Astor Enerji is exposed to macroeconomic risks such as currency volatility, inflation, and geopolitical instability, which can affect demand, input costs, and access to financing.

Competition from domestic and international players may pressure margins, market share, and the ability to sustain pricing strategies.

Execution and expansion risks include delivering large-scale projects on schedule, managing field assembly and commissioning, securing qualified labor, avoiding operational delays caused by machinery downtime or technical issues, and the potential failure to execute the business strategy by not securing new orders in export markets, not entering targeted new geographies, or failing to expand the customer base as planned.

Supply chain risks involve potential disruptions or cost increases in essential raw materials such as grain-oriented electrical steel (GOES), transformer oil, and other critical inputs, as well as equipment and components, creating the risk of production delays, late deliveries, and payment defaults.

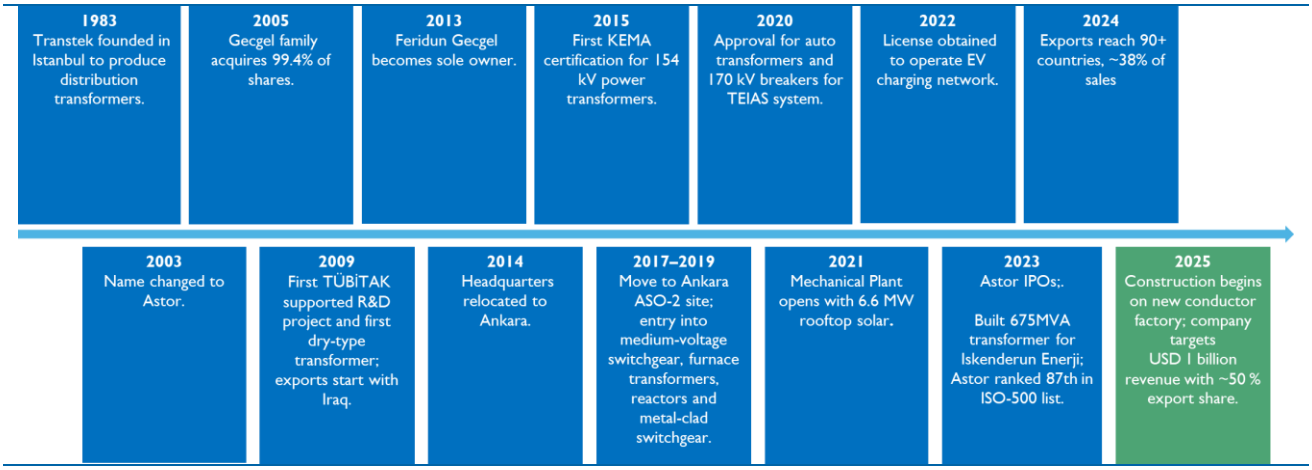
The company also faces political risks due to the significant role of public authorities in electricity transmission and distribution markets, as well as client concentration risks, where the loss of major customers could materially impact revenue and profitability.

# Company History

Astor traces its beginnings to Transtek, established in Istanbul in 1983 to manufacture distribution transformers. In 2003, the company changed its name to Astor, and in 2005, the Gecgel family acquired 99.4% of the shares, with the remainder held by Ozguney Elektrik. Initially focused exclusively on distribution transformers, Astor began diversifying its operations in 2009, launching its first TUBITAK-supported R&D project and manufacturing its first dry-type transformer. That year also marked the start of its export activities, first to Iraq and then to Northern Ireland via a five-year agreement with the local distribution company, its first entry into the European market.

In 2013, Feridun Gecgel acquired 100% of the company shares. In 2015, Astor obtained KEMA certification for 154 kV 62.5 MVA and 100 MVA power transformers, which allowed the company to qualify as a supplier for TEIAS. That same year, Astor was recognized as an R&D Center by the Ministry of Industry and Technology.

**Figure 8: Company History**




Source: Company data and UNLU & Co

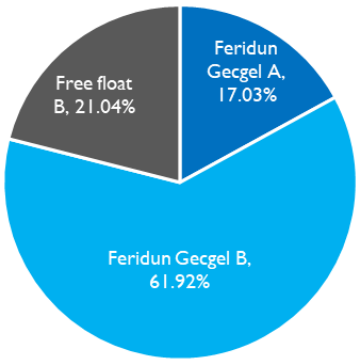
Between 2017 and 2020, Astor transitioned to a larger manufacturing site in Ankara's 2nd Organized Industrial Zone. It launched medium-voltage switchgears in 2017 and added arc furnace transformers in 2018. In 2019, it expanded into metal-clad switchgears, shunt and series reactors, and produced Turkey's first 800 kV power transformer under a TUBITAK-backed project. Also in 2019, it completed its first 400 kV 250 MVA shunt reactor for the TEIAS system. In 2020, the firm received KEMA certification for its 250 MVA 400/164 kV auto transformer and 170 kV breakers, leading to their approval for use in the TEIAS transmission system.

Since 2020, Astor has been investing in capacity and automation at its mechanical plant, expanding its product range and aiming to enter new segments, particularly renewable energy and EV charging networks. Major completed projects include deliveries of 400 kV class transformers to grid operators in Albania, Spain, and Iraq, and several large TEIAS tenders.

Astor achieved a significant milestone with the completion of its Mechanical Plant in September 2021, serving as a manufacturing facility for procuring semi-finished and finished products for its primary production lines. The operationalization of this plant was complemented by the installation of a 6.6 MW solar power plant on the roof, contributing substantially to the company's energy requirements.

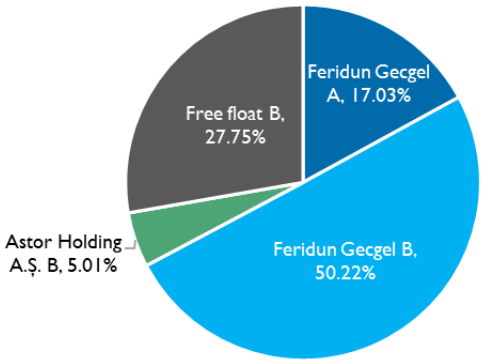
Astor has recently diversified its investments beyond its core operations. By June 2025, the company operated 595 EV charging sockets across 45 provinces in Turkey under its network operator license. It has also invested in two solar power projects, one at its Ankara and another in Romania, both treated as financial investments rather than as part of electricity generation activities.

**Figure 9: Post-IPO shareholder structure**




Source: Company data, UNLU & Co Research

**Figure 10: Current Shareholder Structure**



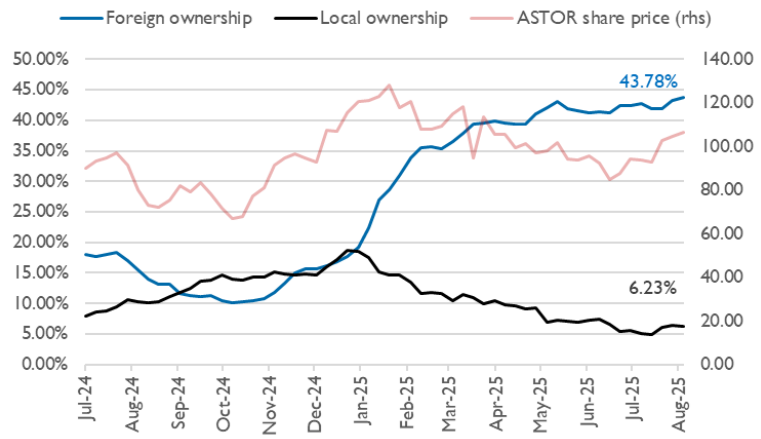

Source: Company data, UNLU & Co analysis

Astor went public in January 2023 at TL 12.5 per share. The IPO increased paid-in capital from 850m to 998m shares and raised TL 2.6 billion in proceeds, of which TL 1.8 billion was added to company equity.

In March 2024, Astor Holding bought 79.85m unlisted shares from Feridun Gecgel, then sold 29.9m shares to an international institutional investor at TL96.26/sh, reducing its stake to about 5 percent. Later in June 2024, Gecgel sold additional shares, bringing his total holding to roughly 67.3 percent while remaining the controlling shareholder.

In February 2025, FMR LLC (Fidelity Investments) raised its stake above the 5 percent threshold with 50.6m shares, the last disclosed purchase price being around TL108/sh.

**Figure 11: Institutional ownership and share price**




Source: Company data, Takasbank, UNLU & Co

Foreign institutional investors steadily increased their ownership in Astor Enerji from October 2024 onwards, rising from about 10 percent in early October to above 40 percent by April 2025. During the same period, local institutional investors gradually reduced their positions, declining from above 14 percent in late 2024 to below 7 percent by mid 2025. The share price, which recovered from October 2024 lows as foreign inflows accelerated, peaked in January 2025 when foreign ownership exceeded 30 percent but entered a volatile downward trend through mid 2025 despite foreign positions remaining high. The data indicates that while foreign inflows supported the stock's rally until early 2025, persistent selling by local institutional investors and reduced domestic support put pressure on the share price during the rest of 2025.

## Products

Astor's product range has expanded substantially from its early focus on distribution transformers under the Transtek brand to a broader portfolio that now spans multiple voltage classes and grid components. As of 2025, the company delivers a wide range of equipment and services supporting electricity transmission, distribution, and end-use systems across domestic and export markets.

**Distribution Transformers**
Distribution transformers account for a material share of total sales, consistently contributing over 30% of revenues across recent periods. These are used in medium voltage networks to adjust grid voltage to safer levels for residential or commercial use. Astor manufactures these products in three major subcategories:

1. **Oil-immersed transformers**: These operate up to 36 kV and 10 MVA and are either hermetically sealed or come with conservator tanks. Heat is managed by insulating oil, enabling efficient dissipation and reliability in extended operation.

2. **Dry-type transformers**: Coils are encapsulated in epoxy resin and cooled by air. These transformers are flame-retardant, moisture-resistant, and suitable for indoor installations. They can tolerate overloads up to 40% with fan-assisted cooling. Despite higher noise and cost, they face growing demand due to operational safety and lower maintenance, offering higher margins than oil-immersed types.

3. **Custom industrial units**: These are tailored for specific requirements in industrial applications, such as high-current arc furnace transformers, rectifier units, and shunt reactors.

**Power Transformers**
Astor's high-capacity transformers support transmission systems and substation configurations. Products are grouped as:

- **Generator step-up transformers**: Used at power plant outputs to raise voltage for transmission lines.

- **Grid transformers**: Deployed at substations to reduce voltage levels.

- **Industrial transformers**: Designed to handle frequent surges and short circuits in industrial settings.

- **Special-purpose transformers**: Include mobile, railway, marine, arc furnace, and phase-shifting types.

The company has developed generator step-up transformers rated up to 400 kV and 675 MVA, including projects for 800 kV short circuit test-certified designs, demonstrating capability in meeting ultra high-voltage infrastructure requirements.

**Switchgear and MV/HV Systems**
Astor manufactures equipment to manage and protect medium and high voltage lines. These include:

- **Metal-clad switchgears**: These systems feature individually compartmentalized metal enclosures for each component (such as busbars, circuit breakers, and relays), offering maximum isolation, arc containment, and service continuity. They are designed to provide high levels of safety and are typically used in critical infrastructure or industrial facilities where fault isolation and maintenance access are essential. Fully enclosed systems that ensure operational safety and modular expansion. Units are certified up to 40.5 kV (KEMA, TÜBİTAK) and serve industrial plants, substations, and transport infrastructure.

- **Metal-enclosed switchgears**: These systems also house components in metal cases but without full internal segregation between compartments. They are more compact and easier to maintain than metal-clad units, often used in commercial buildings, substations, and renewable energy installations where space and cost considerations dominate. Air-insulated, designed for easier maintenance, used in commercial buildings and solar farms.

- **Concrete kiosks**: Compact, relocatable structures with internal compartments for HV/MV/LV equipment. These include stationary and trailer-mounted versions for temporary or remote site operations.

- **Gas-insulated switchgear (GIS)**: Astor manufactures GIS units including ring main units and circuit breakers using SF6 insulation, designed for long-life performance with minimal maintenance. These systems offer compact installation footprints and are positioned alongside other MV/HV switchgear as part of the company's standard offering.

- **HV breakers**: Since 2020, Astor supplies 170 kV, 4000 A, 50 kA circuit breakers to TEIAS. These were previously imported, and now form a local alternative with full international certification (CESI, Italy).

**Ongoing Investments and Vertical Integration**

Astor is expanding its manufacturing footprint with investments aimed at vertical integration and product diversification. These include a dedicated production line for enamel-coated copper and aluminum conductors to reduce input costs and secure raw material supply for transformer manufacturing. Additionally, the company is investing in inverter production to broaden its energy systems offering, targeting synergies with its established transformer and switchgear products.

**Additional Operations**

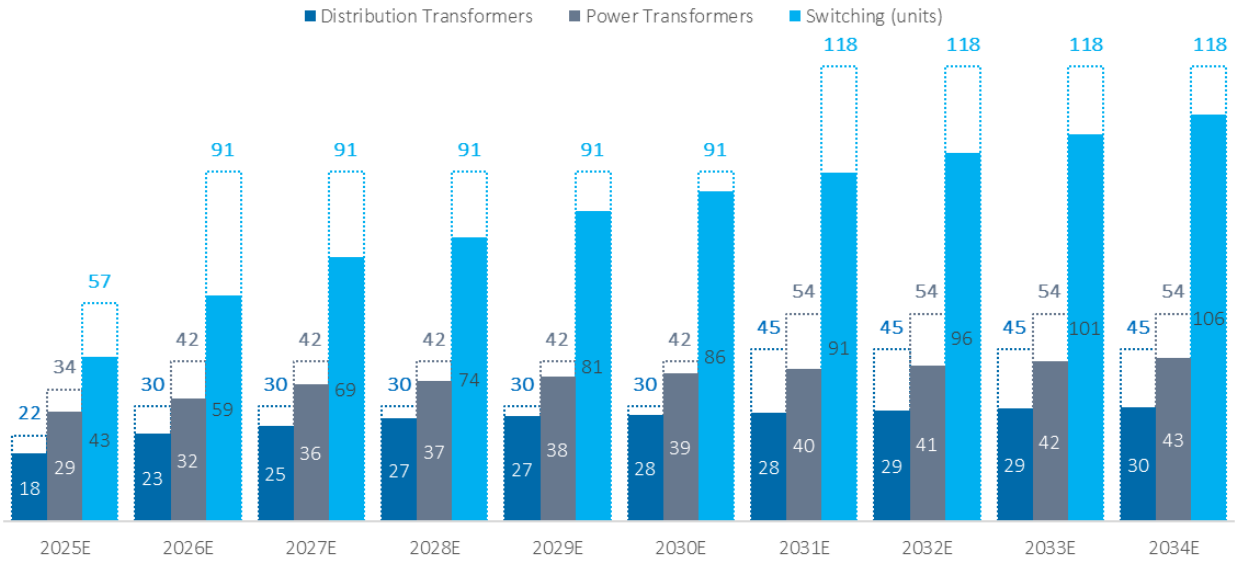
Under its "Trade and Other Sales" category, Astor includes auxiliary activities such as component sales, maintenance, engineering support, and revenue from its own rooftop solar installations as well as EV charging stations.

## Capacity

Astor Enerji operates production under three primary product lines: power transformers, distribution transformers, and medium to high voltage switchgear. While the company discloses quarterly production data, actual capacity must be inferred from full-year production figures reported separately.

In 2024, the company produced 19,184 distribution transformers totaling 16,092 MVA, 396 power transformers totaling 27,965 MVA and 26,875 MV/HV equipment units (including kiosks, panels, breakers, RMUs, and metal clad units).

**Figure 12: Capacity and production forecast (MVA & Units)**




Source: Company data, UNLU & Co estimates

Our assumptions for 2024YE based on production and capacity utilization levels are:

- Distribution transformers: 20,000 MVA/year
- Power transformers: 32,000 MVA/year
- Switchgear: 30,000 units/year

Capacity will significantly increase following completion of ongoing investment projects. These include:

- A dedicated line for medium-voltage measurement transformers (36,000 units/year)
- Technology transfer and localized production of 170–245 kV GIS equipment under agreement with Sieyuan
- A new transformer test laboratory with 600 kV lightning impulse capability
- New drying and vacuum ovens for transformer production
- A new conductor facility for in-house production of 12,000 tons/year of enameled and paper-insulated copper and aluminum wire and CTC
- A new 91,000 m² switchgear plant under construction on a 231,925 m² industrial parcel in ASO 2nd and 3rd OSB, with phased commissioning from 3Q25

We incorporate 50% increase for the distribution transformers segment, 30% increase for power transformers and 100% increase for switchgears and electrical components.

The company handles mechanical parts manufacturing, testing, repair, and administrative operations internally. Each product group is supported by its own production setup. The mechanical factory supplies core components like transformer tanks and switchgear enclosures. Internalizing this work reduces reliance on suppliers, avoids delays, and allows tailoring to specific project needs. It also supports substation-level deliveries.

## Clients

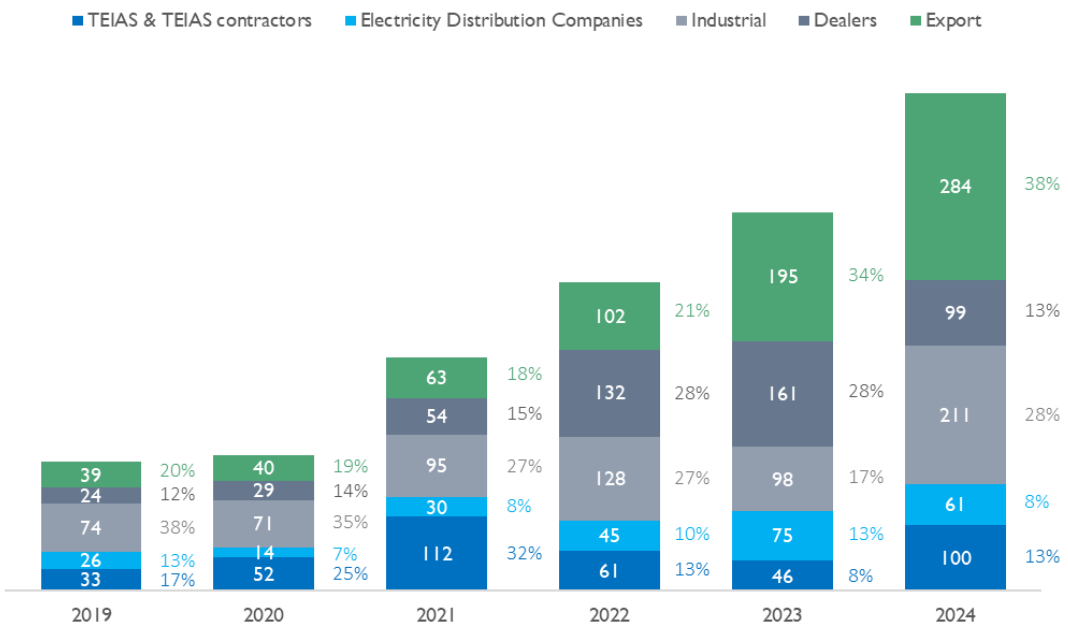
Astor Enerji's domestic operations span several customer groups within Turkey's electricity transmission, distribution and industrial sectors. Domestic customers are served through a mix of direct sales, EPC channels and long-term institutional relationships.

TEIAS and EUAS are responsible for high voltage electricity transmission and generation infrastructure. In 2023, TEIAS's investment budget was 17.3 billion TL and increased to 28 billion TL in 2024. For 2025, the investment plan expanded further to 41.97 billion TL. While Astor products are included in the related tenders, the majority of TEIAS's capital expenditures typically relate to transmission infrastructure such as substations, line construction and system upgrades. Astor supplies power and distribution transformers, medium and high voltage switchgear through direct tenders and EPC contractors. The company has a 7-year average client relationship with these institutions.

Electric distribution companies operate under licenses and control regional distribution networks. Astor works with 21 licensed operators, which together serve 50.7 million users and maintain 508,800 transformers. Deliveries include distribution transformers up to 2,500 kVA, power transformers between 2.5 and 25 MVA, and switchgear below 36 kV. Contracts are fulfilled via EPC channels and direct agreements, with relationship durations averaging 15 years.

Industrial facilities and other customers include large-scale users from metal, mining, cement and renewable energy sectors. These customers invest in grid connection equipment to support production expansion and self-generation. Products supplied range from distribution transformers up to 2,500 kVA to power transformers up to 675 MVA and switchgear up to 170 kV. Sales are made through EPC firms and spot transactions. Astor has maintained 15-year relationships with core customers in this group.

**Figure 13: Revenue breakdown by client category**




Source: Company data, UNLU & Co estimates

Dealers and distributors serve local EPCs and installers through 28 active dealer partnerships. Astor supplies transformers, medium voltage switchgear under 40.5 kV and high voltage switchgear at 170 kV. Dealer relationships average 15 years and provide access to small-scale demand segments with lower fixed costs.

Sales are supported by a combination of state budget allocations, regulated investment cycles and market-based procurement from industrial users and EPC intermediaries.

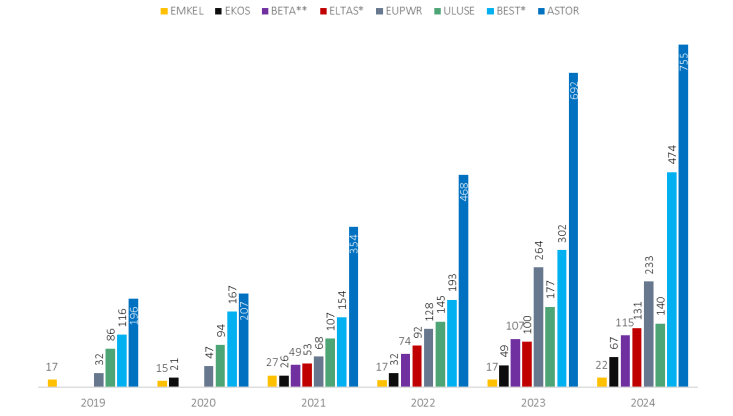
Astor exports to over 100 countries. Key regions include Western Europe, Eastern Europe, North Africa, the Middle East and Central Asia (see Figure 24). Export operations are based on EPC contractor relationships, local tenders and direct industrial demand. Product scope varies by region, ranging from distribution transformers and compact substations to high-capacity power transformers and gas-insulated switchgear. The company has established recurring business in several European countries. Western Europe is led by Ireland, Spain and Portugal, while in Eastern Europe Astor maintains presence in Ukraine and Lithuania. In North Africa and Central Asia, project-based shipments dominate, particularly in infrastructure and generation-linked equipment.

Export pricing is denominated in foreign currency, providing a hedge against domestic cost inflation and currency volatility. Astor also benefits from Turkey's Eximbank credit facilities and free trade agreements in several markets. Export revenues have grown on the back of competitive lead times, tailored engineering and certifications aligned with international grid standards.

## Domestic Competition

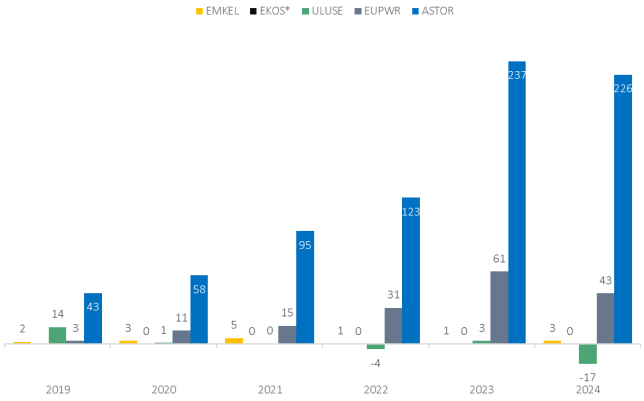
Astor Enerji is currently the largest independent transformer manufacturer in Turkey, based on disclosed financials. The company has consistently reported higher revenue generation and profitability margins compared to other listed domestic peers. Its product focus is primarily on high-volume transformer production, including distribution and power transformers, which positions it as the dominant player in this segment of the Turkish market.

**Figure 14: Local peer revenues (USDm)**




Source: Company data, Unlu & Co Research, *Based on disclosures on ISO500 and ISO Second 500 lists. **2021-2023 data from prospectus, 2024 extrapolated from ISO disclosures

**Figure 15: Local peer EBITDAs (USDm)**




Source: Company data, Unlu & Co Research, *No data for 2019

Other domestic manufacturers operate across the broader electrical equipment segment. Companies like Ekos Electric <EKOS TI, Not Rated>, Ulusoy Elektrik <ULUSE TI, Not Rated>, Europower Enerji <EUPWR TI, Not Rated>, and Best Transformer (private) are active in overlapping product categories that include transformers, medium voltage equipment, and various electrical distribution solutions. The financial performance of these peers reflects a more volatile pattern, with some companies, particularly Ulusoy Elektrik, reporting declining or negative profitability in recent years. EBITDA margins among these peers have fluctuated significantly, with some businesses operating at low or negative margins in recent reporting periods.

Privately held manufacturers, such as Best, Eltas, and Beta Enerji, are included in industry lists like the ISO 500 but detailed profitability data is not publicly disclosed, limiting comparability beyond topline figures. Eltas has expanded its operations with a modern production facility in Izmir, opened in 2024, which includes updated capacity for power transformer production, again without concrete guidance on output levels or market targets. Beta Enerji has also launched a new investment program, amounting to approximately USD130m starting in 2024, which was disclosed during its IPO process. Full-year financial data for 2024 is not yet available for Beta Enerji, but based on ISO 500 data, the company has shown steady revenue growth in recent years, primarily focused on electrical equipment production, including transformers.

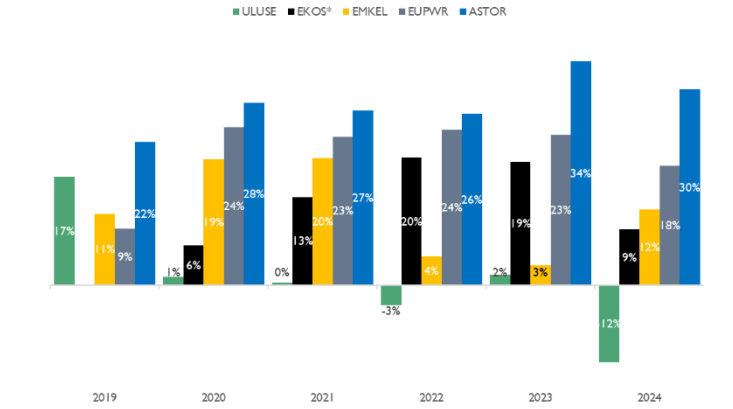
Ekos Electric has also announced investment plans and inaugurated a new transformer factory in Balikesir Organized Industrial Zone, with a targeted capacity of approximately 2,000 transformers per year. The total investment value for this facility is reported at approximately 50 million USD. The facility focuses on distribution transformers and renewables-related applications and is planned to be operational in 2026 following a phased ramp-up.

Europower Enerji <EUPWR TI, Not Rated>, the manufacturing arm of Girisim Elektrik <GESAN TI, Not Rated>, which focuses primarily on engineering, procurement, and construction (EPC) services, has expanded its production footprint with two new subsidiaries. The first, Europower World Enerji, is focused on high voltage power transformer production, with facilities targeting product ranges up to 550 kV and 330 MVA, and an operational start-up scheduled for 2025. The second, Euromek Elektrik Sanayi Taahhut Ticaret A.S., established in May 2024 with a capital of TL300m and 60% ownership by Europower Enerji, will produce oil-type medium and high voltage measuring transformers (up to 550 kV), high voltage bushings, and related products. Both subsidiaries are expected to serve domestic and export markets, with Europower's management projecting a significant contribution from power transformer and high voltage equipment sales, particularly targeting Europe and North America.

Emek Elektrik <EMKEL TI, Not Rated> is also active in transformer production but operates in distinct market segments with no stated intention to compete directly with Astor Enerji in high-volume standard power transformers, as indicated by its controlling shareholder.

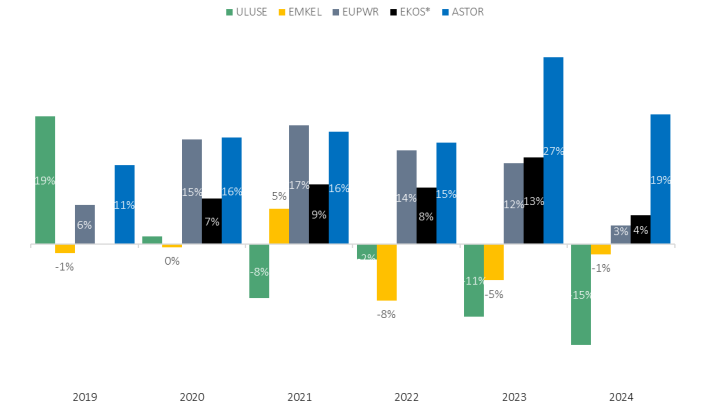
Ulusoy Elektrik had previously pursued expansion plans for a new factory investment but abandoned these plans in 2023, returning its allocated land in the Anadolu Organized Industrial Zone. In early 2025, the company announced the discontinuation of several product lines due to profitability concerns, with no new capacity investments announced for transformers.

**Figure 16: Local peer EBITDA margins**




Source: Company data, Unlu & Co Research, *No data for 2019

**Figure 17: Local peer Net Income margins**




Source: Company data, Unlu & Co Research, *No data for 2019

Additionally, there are multinational companies with operations in Turkey, such as Siemens Energy, Schneider Electric, and ABB, that have some level of local manufacturing capacity. These facilities typically serve local project-based demand or specialized contracts, but limited disclosure on Turkey-specific sales and production volumes prevents direct comparison with independent domestic manufacturers. Their financial reporting is consolidated at the regional or global level, making it difficult to assess their competitive positioning within the Turkish market.

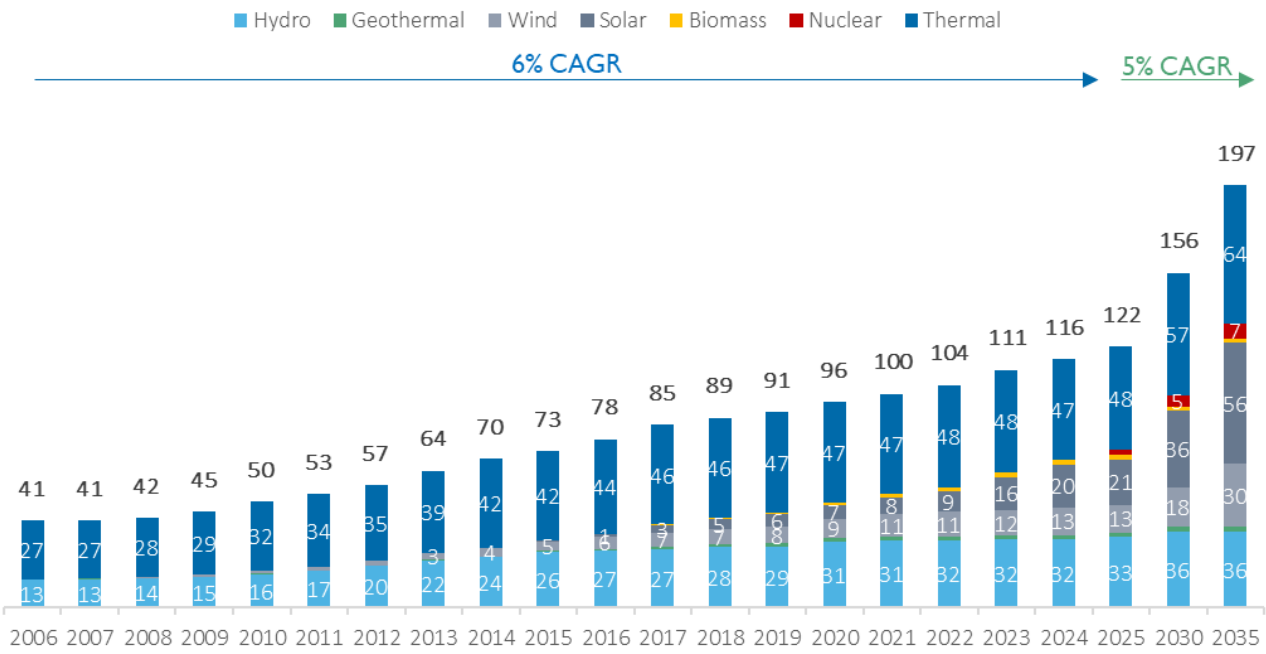
In recent years, the sector has attracted external interest, notably with reports of acquisition discussions between Hyosung Heavy Industries and Europower's parent company Girisim Elektrik, though no transaction has materialized to date. The market has previously seen such international acquisitions, most notably Eaton's 2019 acquisition of a controlling stake in Ulusoy Elektrik, reflecting foreign strategic interest in Turkish electrical equipment manufacturers.

Overall, the current market reflects significant differentiation among domestic players. Astor Enerji holds the largest scale and financial stability, while other manufacturers exhibit varying strategies, ranging from capacity expansions in new segments to recent contractions in product scope. This dispersion shapes a fragmented competitive environment across Turkey's transformer and broader electrical equipment sector.

## Sustained Growth Ahead in Domestic Market

Turkey's transformer market is set to expand structurally over the coming decade, driven by rising peak electricity demand, continuous grid development, and the scheduled replacement of aging infrastructure. Based on our internal modeling and forecasts, transformer demand is expected to rise from approximately 157k MVA in 2025 to over 239k MVA annually by 2034, a CAGR of 5%, reflecting both the physical expansion of the network and a sustained cycle of asset renewal.

**Figure 18: National electric generation rollout plan (2035)***

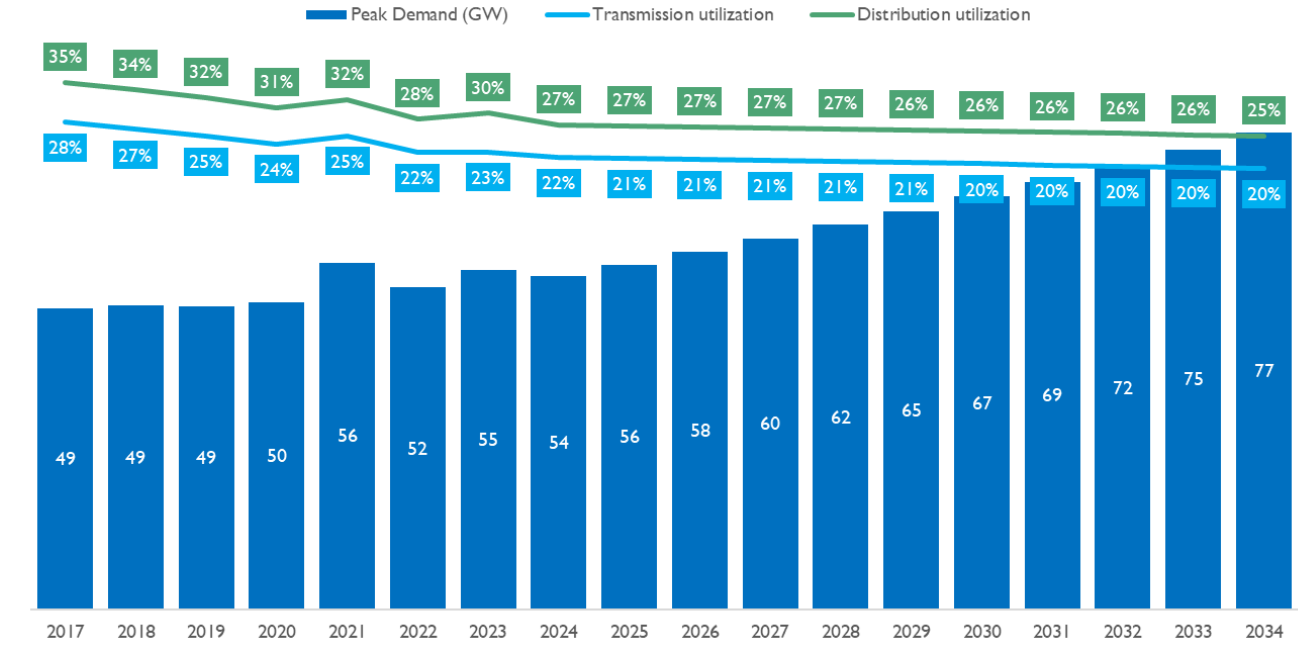



Source: 2022 Turkey National Energy Plan, UNLU & Co Research, *Nuclear Energy generation will start in 2026

The underlying driver is the growth in peak demand, primarily driven by economic development, industrial activity, and ongoing electrification across sectors such as transport and heating. While the share of renewables is increasing, it is not the direct cause of rising peak load, but it does reshape how the system responds to demand surges and variability. Meeting this demand requires grid reinforcement across transmission and distribution layers, not just in generation capacity. Renewables, by nature, shift the topology of the power system, requiring more geographically distributed injection points, tighter voltage management, and increased transformer nodes throughout the grid. These trends point to a growing number of transformation interfaces and a more diverse mix of transformer specifications, particularly in medium-voltage applications.

Our peak demand forecast is anchored in the official TEIAS Electricity Demand Projection Report (2025–2034), which provides low, base, and high scenarios. We applied proportional growth rates derived from these scenarios to estimate transformer capacity additions under varying demand conditions. To account for infrastructure sizing, we used a transformer utilization factor of 0.90 to translate peak demand into required MVA capacity.

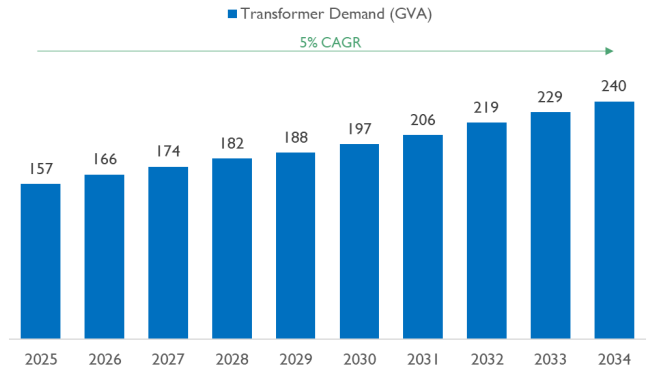
**Figure 19: Peak Demand Forecast & Transformer Utilization Levels**




Source: TEIAS, EPDK UNLU & Co Research

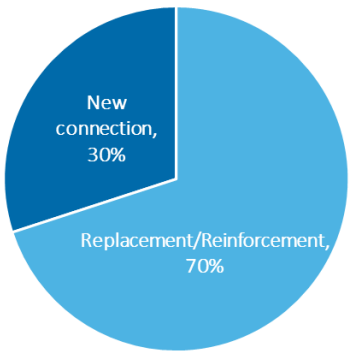
Transformer demand is further supported by replacement activity which occurs due to asset aging, overheating, random failures, short-circuit events, and extreme weather impacts. Based on a 2.78% annual retirement rate of the existing transformer stock, corresponding to an assumed average service life of approximately 30-40 years, replacement volumes account for a stable, recurring share of total demand. We based this figure on a uniform age distribution and no life extension, roughly 1/36th of the installed base being retired each year. Many transformers deployed during Turkey's last major grid expansion phase in the 1990s and early 2000s, when TEIAS and TEDAS undertook significant transmission and distribution investment programs, are reaching the end of their service life. These infrastructure efforts were part of Turkey's liberalization and privatization of the energy sector, and the assets commissioned during that period now align with typical end-of-life timelines.

**Figure 20: Transformer demand**




Source: TEIAS, EPDK, UNLU & Co Research

**Figure 21: Demand breakdown**




Source: TEIAS, EPDK, UNLU & Co Research

However, replacement demand accounts for a significantly higher share of total demand than industry averages, estimated at approximately 65-70%. This reflects not only end-of-life retirements, but also proactive replacement cycles driven by declining transformer efficiency over time. In certain industrial and distribution applications, companies opt to replace transformers well before their technical end of life due to rising operational losses, with payback periods for new, more efficient transformers often achievable within three to four years. This elevated replacement ratio ensures a

stable and dominant contribution to total transformer demand, reducing dependence on fluctuations in new capacity additions and providing a predictable volume base for manufacturers.

Importantly, as transformer demand rises, it drives proportional growth in adjacent categories such as switchgear, protection units, and related medium- and high-voltage electrical equipment. Astor, as an integrated manufacturer of transformers and switchgear, is well positioned to capture this convergence.

Turkey's future grid will require more transformation points to handle growing electricity demand and evolving consumption patterns. As peak load increases and distributed power sources expand, the number of transformers needed, across voltage classes, will rise accordingly. This trend translates into robust and sustained demand growth, driven both by new capacity requirements and systematic replacement cycles. For Astor, this environment presents strong volume opportunities in its core transformer business, supported by consistent tailwinds across utility, industrial, and infrastructure segments. Suppliers that can scale across transmission and distribution classes while ensuring reliable delivery and engineering support will be best positioned to capture this momentum.

Domestic manufacturers are also responding to this market expansion by adding capacity to their transformer production lines or establishing new manufacturing facilities, as discussed in the local competitors section of this report. This wave of capacity expansion may lead to increased competitive pressures on pricing in the coming years. Astor plans to mitigate these pressures by leveraging its integrated production setup, including its recently developed inverter production and its copper and aluminum processing capabilities, which provide additional cost and supply chain advantages.

## Structural Shortage, Strategic Advantage

The global transformer market is in a prolonged supply-constrained upcycle, driven by simultaneous structural demand growth and systemic bottlenecks across the supply chain. Demand is being pushed by electrification, grid decentralization, distributed energy buildout, data center expansion, and EV infrastructure rollout. NREL forecasts a 260% increase in distribution transformer needs in the US alone by 2050, while the IEA expects renewables to account for 95% of global power capacity additions through 2026.

The shortfall became acute during the COVID period, but structural drivers predate the pandemic. For decades, demand in developed markets was centered on replacement, leading to market consolidation and underinvestment. The July 2024 U.S. Department of Energy (DOE) Large Power Transformer Resilience Report highlighted that over 85% of large power transformers (LPTs) in the US are imported, domestic production is running below capacity due to labor and material bottlenecks, and average lead times for LPT delivery exceed 36 months, with maximum quotes reaching 60 months.

Subsequent updates in 2025 from DOE and industry sources confirm the continuation of these trends. According to DOE's latest briefings, the U.S. manufacturing footprint for LPTs remains insufficient to meet surging demand, driven by grid modernization, renewable buildout, and electrification goals. Market intelligence from Hitachi Energy, updated as of mid-2025, indicates backlogs persist with high-capacity units quoted at over 200 weeks delivery time, and the company's USD6bn global expansion plan will only be fully operational post-2027. Industry sources such as Northfield Transformers also report supply lead times for critical transformers exceeding four years in North America.

Material shortages, particularly in grain-oriented electrical steel and copper, remain unresolved. DOE's July 2024 report identifies domestic GOES production as a key bottleneck with limited capacity and high costs, while labor shortages persist across transformer manufacturing, erection, and maintenance segments. The DOE's 2024-2025 updates conclude that the overall supply-demand mismatch in transformers will continue well into the late 2020s.

This mismatch will not be resolved in the short term. Transformers are low-volume, high-specification products with long build cycles, limited standardization, and heavy reliance on constrained inputs. New capacity additions are hampered by capital intensity, protracted construction timelines, and scarce skilled labor pools. Reshoring efforts in the US and EU have failed to accelerate meaningfully due to regulatory delays and unresolved raw material dependencies. Recent DOE assessments further confirm the impact of tariffs on imported steel, aluminum, and LPTs, adding cost pressures and complicating procurement cycles.

Domestically, competitive pressure remains limited due to high entry barriers, especially in meeting the necessary standards, and localized production dynamics. On the export front, persistent supply tightness and protracted lead times in developed markets are creating incremental market opportunities. Buyers are increasingly diversifying procurement, favoring flexible, responsive suppliers with proven export capacity, as evidenced by the expansion of mutual assistance programs like Grid Assurance, increased reliance on private strategic reserves, and buyer preferences shifting toward suppliers with faster lead times and flexible delivery slots, as reported in the July 2024 DOE report and industry updates from 2025. Astor's established presence in over 100 countries, alongside ongoing capacity ramp-up, positions it well to capture incremental demand.

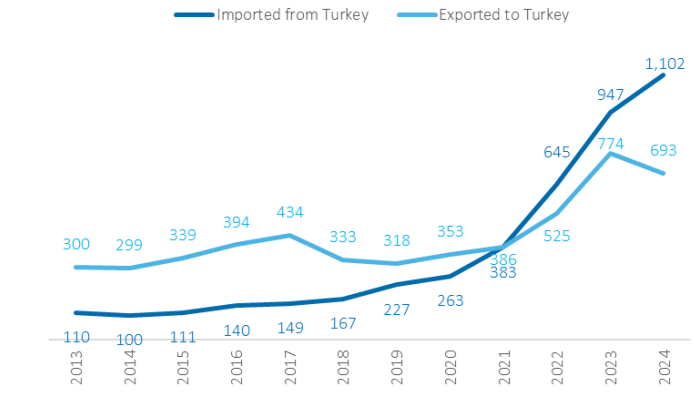
The constrained supply environment supports a high-price, high-utilization supercycle. CURs globally remain elevated with OEMs prioritizing high-margin contracts, strengthening pricing power.

## Europe

Europe is experiencing a convergence of structural challenges similar to those observed in the US market. Electrical infrastructure built in the post-war period is reaching the end of its design life, creating large-scale replacement demand just as new investment is needed to meet decarbonization targets. The rapid expansion of renewables, particularly wind and solar, is driving requirements for grid flexibility, while new industrial loads such as data centers and EV charging networks are accelerating the overall increase in electricity demand.

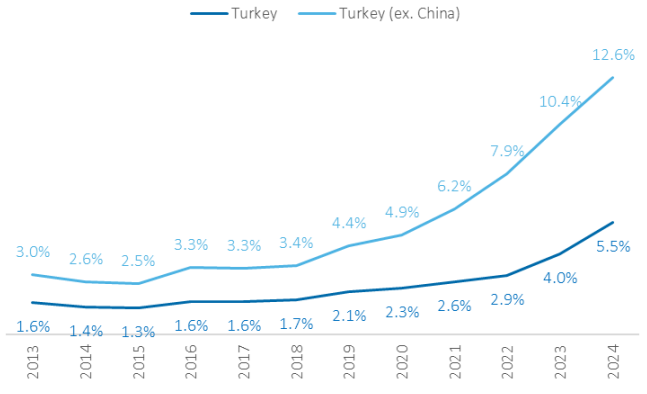
The European Commission's 2023 Action Plan for Grids highlights significant supply-side constraints in the European grid market. Equipment supply bottlenecks are particularly acute for key components such as transformers, with delivery lead times for high-voltage products stretching to several years. Additionally, the report notes escalating costs and limited availability of skilled labor as contributing factors to delayed grid reinforcement efforts. The Commission estimates total electricity grid investment needs at EUR 584 billion by 2030, of which EUR 375-425 billion is required just for distribution grids. These figures exclude generation assets and reflect solely grid infrastructure modernization and expansion. The combined effect is a widening gap between policy ambitions and actual grid deployment capacity, resulting in recurring shortages in medium and high voltage equipment markets and making transformer supply constraints a key factor in delayed grid integration of renewables and electrification targets.

**Figure 22: Transformer sector trade balance with EU**




Source: Eurostat, Turkstat, UNLU & Co Research

**Figure 73: Turkey market share in EU imports**



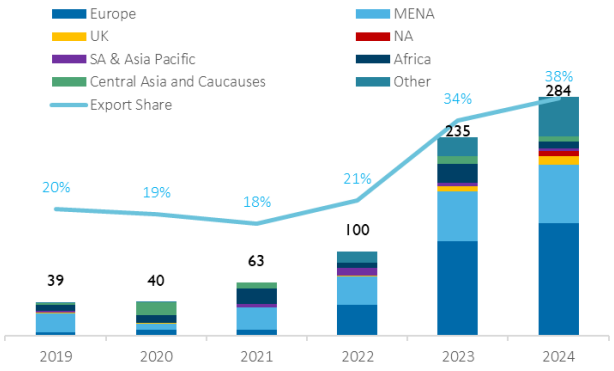

Source: Eurostat, UNLU & Co Research

In this environment, Turkish manufacturers have steadily gained market share in the European Union electrical equipment market, increasing from 1.6 percent in 2013 to 5.5 percent in 2024. Notably, Turkish exporters have captured additional market share from other exporters excluding China, with Turkey's share rising from 3.0 percent in 2013 to 12.6 percent in 2024. Turkish manufacturers, benefiting from geographical proximity, competitive labor costs, and accelerating industrial scale, have emerged as key alternative suppliers for European utilities and EPC contractors. The dislocation between demand and in-region supply, exacerbated by high energy and input costs in Europe, has created a structural opening for Turkish exports to expand beyond their traditional base in low-voltage components and penetrate higher value-added segments, including power transformers and medium voltage switchgear.

Astor also provides consultancy, maintenance, and repair services for its transformer and switchgear products as part of its commercial activities. As the company has developed products specifically for markets like Spain's solar energy sector, the

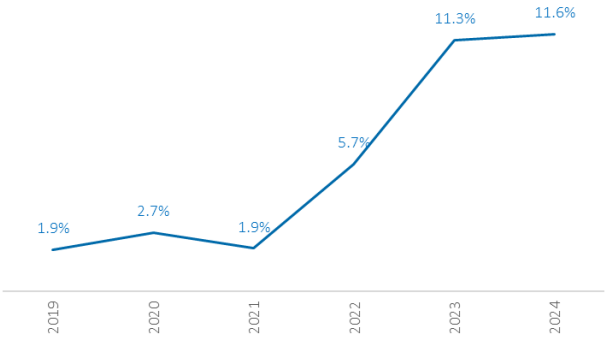
existing strategy focuses on serving export markets through product customization and service support, which could be expanded with local facilities in key regions as international sales grow.

**Figure 24: Astor's exports**




Source: Company data, UNLU & Co Research

**Figure 85: Astor's share in Turkey's EU exports**




Source: Company data, Eurostat, UNLU & Co Research

In 1Q25, exports represented 54 percent of Astor's revenues, up from 45 percent in 1Q24, with Europe accounting for 48.3 percent of total exports. Product positioning in medium and high voltage segments combined with production capacity expansions directly align with the European market's demand drivers, particularly in grid reinforcement and renewable energy integration projects.

Astor's backlog reached USD769m as of 2Q25, with 57 percent stemming from export orders and 80 percent concentrated in power transformers, reflecting the structural demand patterns in Europe. Ongoing capacity investments in Ankara, such as new transformer core lines and in-house conductor manufacturing, aim to ensure production flexibility and reduce external supply constraints.

Astor also benefits from strategic interest by established European manufacturers, who have approached the company for supply cooperation in response to their own capacity constraints. While no formal partnerships have been announced, the company's growing scale and capability make it a viable candidate for future supplier agreements targeting Europe's energy transition needs.

## EV

Electrification of road transport in Turkey is accelerating and will have direct consequences for medium-voltage and low-voltage grid infrastructure. According to SHURA's Net Zero scenario (2023), Turkey's EV stock (including light commercial vehicles) is expected to reach 11 million by 2035, corresponding to ~37 TWh of incremental electricity demand per year. The business-as-usual (BAU) scenario assumes only 5 million EVs in 2035.

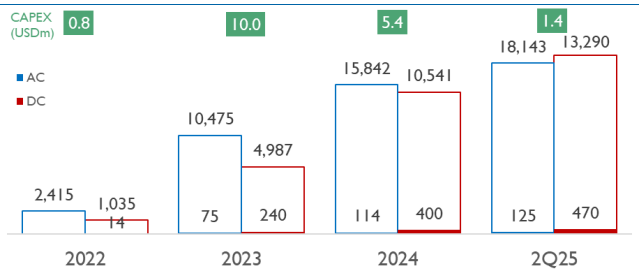
This scale of electrification requires material new investment in distribution transformers. SHURA's estimate of 10% incremental transformer investment in the Net Zero scenario and 3% in the BAU case is based on pilot regions, which primarily cover urban areas. When scaled nationally, considering lower EV density in rural zones and partial mitigation through smart charging, the effective uplift to total transformer investment is likely closer to 5–7% in the Net Zero scenario and 1.5–2% in BAU.

**Figure 26: Metropolitan areas additional transformer investment**

| | # of EVs (2035, m) | Addl. MV/LV Transformer Capex |
|---|---|---|
| BaU | 5 | 3% |
| Net Zero | 11 | 10% |

Source: SHURA "Transportation Sector Transformation: Integration Of Electric Vehicles Into Turkish Distribution Networks", 2024

**Figure 27: EV charging stations (#) and Astor's investments**




Source: Company data. EMRA, Unlu & Co Research

These exclude high-voltage assets and assume constant reliability standards. Transformer overloading becomes a constraint during peak charging, particularly in dense residential districts. Astor is positioned to benefit through distribution clients' additional demand focused on urban network reinforcement.

Separately, Astor also gains exposure through fast-charging infrastructure. As of June 2025, the company operates 595 EV charging sockets, comprising 470 DC and 125 AC units, giving it a 1.87% total market share. The DC segment is more commercially significant, where Astor holds a 3.49% share, ranking 6th among operators. DC chargers provide higher throughput and are typically located in strategic, higher-traffic areas, requiring transformer-grade electrical infrastructure that aligns with Astor's core business.

Despite this positioning, EV charging investments are not yet financially value-accretive. The segment is primarily driven by strategic considerations, brand presence, ecosystem integration, and optionality in a growing electrification trend. Market dynamics remain subsidy-driven, and monetization is limited by low utilization rates and regulated tariffs. Nevertheless, Astor's early presence provides optionality as the segment matures.

## Solar Power Plants

Astor Enerji previously announced plans to develop a solar power plant on land it owns in the Bala district of Ankara. On 15 September 2023 the company signed a turnkey contract for the construction and commissioning of a 14 MW solar power plant worth USD10m. In March 2025 Astor Enerji signed agreements in Romania with a local project development company to develop up to 350 MW of solar power plant projects, including obtaining technical connection approvals and construction permits. To coordinate these investments the company established a wholly owned subsidiary in Romania, ASTOR RO ENERGY S.R.L. In May 2025 this subsidiary signed agreements to acquire three Romanian companies holding a total of 279 MW of solar power projects. In the same month Astor Enerji acquired 100 percent of the shares of Asener Enerji Uretim A.S., which holds a 189 MW license for solar power generation in Ankara, for a consideration of TL281m.

These investments represent financial opportunities in renewable energy projects rather than a strategic shift into electricity generation. In our NPV calculations we assign a value of USD15m to these projects, applying a 50 percent discount to account for project development risks and the part already included in the guidance for trading and other revenues.

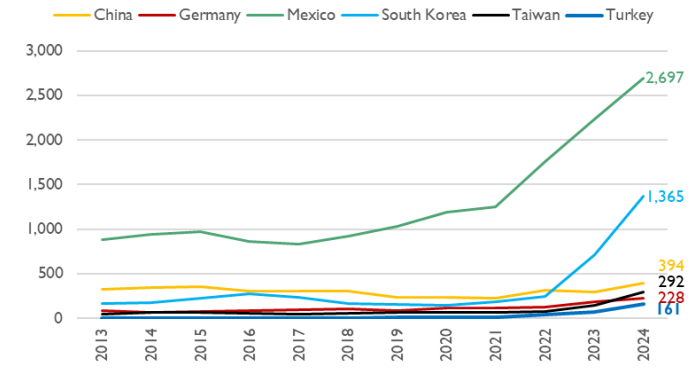
# Potential Businesses

*We have this section only as a precursory exposition on the potential effects of US business and Ukraine & Syria rebuilding efforts and do not incorporate them in our valuation at this point. Realized business will certainly vary from these forecasts.*

## US

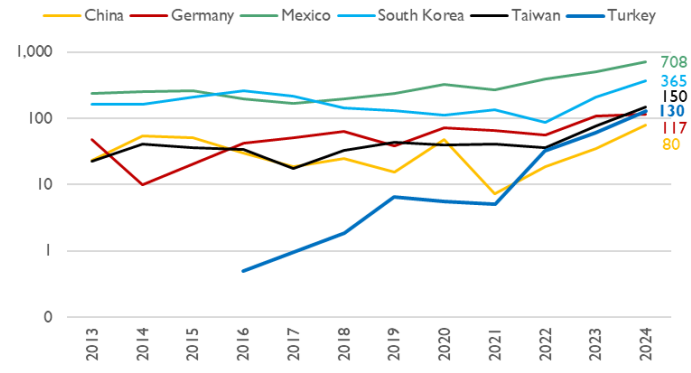
Due to the structural issues and chronic supply shortages in the US transformer market already outlined, Astor Enerji is positioning itself to capitalize on these favorable market dynamics. The company aims to leverage its established production base in Turkey to serve this demand and benefit from the evolving market landscape. Even with the planned capacity additions and investment announcements by global manufacturers, the available data indicates that these measures will fall short of alleviating the gridlock in the US transformer market.

**Figure 28: Transformer Imports of US**




Source: USITC DataWeb - U.S. Department of Commerce, UNLU & Co Research

**Figure 29: Large Power Transformers Imports of US (Log scale)**




Source: USITC DataWeb - U.S. Department of Commerce, UNLU & Co Research

Mexico and several Asian countries, particularly South Korea, China and Taiwan, account for most US transformer imports in value terms. Mexico has consistently been the largest supplier, with imports rising from USD884m in 2013 to USD2.7bn in 2024. South Korea increased its share sharply over the same period, while China and Taiwan maintained smaller but steady positions.

In the large power transformer segment, Mexico again leads, followed by South Korea, Taiwan and Germany, which Turkey surpassed in 2024. Turkish exports in this category were negligible until 2016 but have grown quickly to USD130m in 2024. This growth shows that Turkish manufacturers can build a presence in a segment that is already penetrated and has established suppliers. Majority of the imports from Turkey consist of large power transformers, with this share being 85%, 84% and 80% over the last three years.

Compared to the announced investment programs of global transformer manufacturers, Astor Enerji's USD200m investment project is within a competitive range relative to peers. For example, Delta Star is expanding US capacity with a USD20m program, Hyundai Electric has allocated USD15m for a 10% capacity boost, and Hyosung Heavy Industries is investing KRW67bn (around USD48m) to double US capacity by 2026. Siemens Energy's US-focused investment stands at USD150m, LS Electric targets USD240m investment by 2030, while Hitachi Energy's direct US allocation amounts to USD250m as part of its larger global strategy. In this context, Astor's USD200m program not only matches but in many cases exceeds the investment levels of several competitors targeting the US market.

Astor Enerji's technological and production capabilities include manufacturing high MVA and high-voltage transformers. The company holds certifications such as KEMA but KEMA is not recognized as a Nationally Recognized Testing Laboratory (NRTL)

in the United States. Astor is in the process of obtaining UL certification, as UL is an NRTL and its mark is widely required for regulated US utility tenders and infrastructure projects. While sales to markets such as Puerto Rico have been possible under frameworks that accept other certifications, participation in most continental US utility projects requires a valid NRTL mark such as UL to meet safety and compliance requirements.

**Figure 30: Potential tariffs**

| Country | April 2 Tariff Rate | August 1 Tariff Rate | August 7 Tariff Rate |
|---|---|---|---|
| China | 34% | 30% | 30% |
| Japan | 24% | 15% | 15% |
| South Korea | 25% | 15% | 15% |
| Mexico[1] | Exempt | 30% | 25% |
| Turkey | 10% | 15% | 15% |

Source: BBC, UNLU & Co Research, [1] with ongoing 90-days pause for a trade deal and mostly exempt due to USMCA

Chinese transformer imports are effectively barred from the US market by Section 301 tariffs, which raise total duties above 100 percent. South Korean producers pay minimal duties with limited anti-dumping measures. However, the tariff structure remains fluid. An initially announced 25 percent reciprocal tariff for South Korean products was later revised down to 15 percent, and ongoing trade negotiations introduce further uncertainty, especially in regards to exemptions. The outcome of these talks will determine whether Turkey can capture a relative advantage. If the final agreement results in favorable treatment for Turkey relative to higher-tariff jurisdictions, Astor's pricing advantage could be preserved or enhanced. Alternatively, even under the current structure, Turkey remains among the lowest-tariff countries, supporting Astor's competitiveness in the US market until local production plans are implemented.

Potential Valuation

Based on our forecasts, Astor's US operations could reach revenues of USD50m in 2026 and grow to USD255m by 2034, with EBITDA rising from USD15m to USD80m over the same period. Applying our valuation assumptions, this business could add an equity value of approximately USD355m, corresponding to around TL18 per share. These figures represent the potential upside from the US market if Astor successfully captures market share in the large power transformer segment.

To fully access the market and avoid tariff costs, Astor may need to establish a manufacturing or assembly presence in the US. A potential investment of around USD100m could be required to build a new plant or acquire an existing assembly company. Such a move would reduce logistics costs, eliminate import tariffs, and improve delivery times, making Astor more competitive in US utility tenders. While this capex would increase initial outlays, it would also strengthen the company's long-term positioning in a market with sustained demand and limited domestic production capacity. Factoring in this investment, the valuation impact would still be positive if the company succeeds in scaling sales in line with forecasts, given the high-margin nature of large power transformer projects in the US.

**Figure 31: US NPV**

| US | 2026E | 2027E | 2028E | 2029E | 2030E | 2031E | 2032E | 2033E | 2034E |
|---|---|---|---|---|---|---|---|---|---|
| Revenue | 50 | 100 | 150 | 200 | 210 | 221 | 232 | 243 | 255 |
| EBITDA | 15 | 31 | 46 | 60 | 66 | 70 | 71 | 75 | 80 |
| Equity Value | | | | | | | | | 355 |
| +Value/sh | | | | | | | | | 18 |

Source: Company data, UNLU & Co Research

## Syria

The Syrian civil war has inflicted severe and systemic damage on the country's energy infrastructure, with the electricity sector among the most affected segments. Direct physical destruction to the power system is estimated between USD35 to USD40bn according to former Electricity Ministers Omar Shaqrouq and Ghassan al-Zamel, covering the annihilation of generation plants, transmission lines, substations, and transformer networks. Beyond the immediate destruction, indirect economic losses surpass USD80bn due to reduced power availability, diminished industrial output, and ongoing grid instability.

Syria's electricity sector suffered from poor efficiency and outdated infrastructure even before the war, operating under a state-run monopoly model plagued by high losses and chronic outages. The conflict further deteriorated the situation by targeting or neglecting key transformer hubs, leading to widespread failures in voltage stabilization and electricity distribution. As a result, post-conflict Syria has become dependent on highly localized and fragmented power availability, with several regions receiving less than six hours of electricity per day.

Current rehabilitation strategies, led by state authorities and international donors, prioritize the rebuilding of critical distribution infrastructure, especially transformers and substations that represent essential nodes in the power delivery chain. The World Bank has earmarked USD146m for emergency restoration of essential grid components, including transformers and substations. Simultaneously, Qatar's announced USD7bn aid program includes financing for four gas-fired power plants and one solar facility, contingent on parallel investments into supporting grid and substation infrastructure. Both funding sources prioritize the restoration of distribution networks, reinforcing transformer demand in initial recovery phases. Additionally, following the June 2025 lifting of U.S. sanctions, American firms such as Baker Hughes, Hunt Energy, and Argent LNG are preparing to develop a long-term energy masterplan for Syria, including combined-cycle gas power plants in stabilized government regions. Turkey and Qatar have also provided two floating power plants delivering 800 MW to mitigate short-term power shortages, complementing transformer substation repair efforts.

Key operational challenges remain acute. Material shortages, skilled labor deficits, and field insecurity continue to hamper construction activity. Instances of looting, especially theft of transformer copper coils and substation equipment, pose recurring risks to sustainable rehabilitation. Transport bottlenecks and dependency on imports for key electrical components further inflate costs and delay project execution timelines.

The reconstruction of Syria's energy infrastructure is expected to generate demand for key electrical equipment, including medium- and high-voltage transformers and modular substations. Companies with established export capability and production scale, such as Astor Enerji, may have an opportunity to participate in the early phases of grid restoration, particularly in donor-financed projects led by institutions like the World Bank or under bilateral agreements such as Qatar's USD7bn aid package.

### Potential Valuation

Syria's direct power-system damage (USD35–40 billion) includes grid-wide losses. While no Syria-specific breakdown is available, DOE benchmark data suggest transformers account for 15–50% of transmission capital costs. Applying a conservative 25-30% share equates to USD9–12bn of transformer and substation-related infrastructure damage.

Given the phased nature of Syria's anticipated recovery, covering emergency stabilization, reconstruction, and long-term modernization, this addressable market is expected to be spread across a 5–10 year period. The initial focus will likely be on

urgent stabilization of high-priority grid nodes and critical industrial areas, where transformers are indispensable to restoring basic power transmission and distribution functions.

Applying a conservative market participation assumption of 5–10%, Astor's potential share of the transformer segment would correspond to cumulative revenues between USD450m and USD1.2bn over the reconstruction period. On an annual basis, this range translates to USD45–120m depending on the pace of procurement rounds and the company's ability to secure contracts in a competitive and politically sensitive market. According to company commentary, Iraq represents a key export market where Astor Enerji p.a. records approximately USD100m. Management expects that, if full entry into the Syrian market is achieved, initial order volumes could reach comparable levels to Iraq, implying potential early-stage annual revenues around USD100m in the first phases of reconstruction.

**Figure 32: Syria NPV**

| Syria | 2026E | 2027E | 2028E | 2029E | 2030E | 2031E | 2032E | 2033E | 2034E |
|---|---|---|---|---|---|---|---|---|---|
| Revenue | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| EBITDA | 30 | 30 | 30 | 29 | 30 | 31 | 30 | 30 | 30 |
| Equity Value | | | | | | | | | 125 |
| +Value/sh | | | | | | | | | 6 |

Source: Company data, UNLU & Co Research

We evaluate any revenue contribution from Syria under a high-risk discounted cash flow framework, applying a risk-weighted discount of 50 percent to reflect the extreme uncertainty associated with operating in a volatile post-conflict market. Under these assumptions, the net present value (NPV) of the opportunity for Astor reduces to a range of USD100–150m. We acknowledge that the realization of this opportunity remains contingent on multiple variables, primarily the stabilization of Syria's political environment, sustained donor engagement, and the company's ability to secure competitive contract awards in a market with unpredictable execution dynamics.

## Ukraine

The Russian invasion of Ukraine has caused massive destruction to Ukraine's energy infrastructure. The destruction of major nodes, such as the Kakhovka Hydroelectric Power Station, as well as repeated strikes on Ukraine's high-voltage backbone, have rendered large portions of the grid inoperative. As of 2025, total damages to the sector exceed USD14.6bn, primarily affecting thermal power stations, transmission corridors, and substations. Based on the most recent available data, total reconstruction needs for Ukraine are estimated between USD486bn (early 2024 WB/UN assessment, RDNA4) and USD524bn (RDNA5), reflecting continued infrastructure degradation and expanded modernization objectives. Ukraine's recovery blueprint identifies USD47.1bn in necessary investment to fully restore and modernize the energy grid.

Ukraine's reconstruction strategy aims not just to repair war damage but to accelerate the transition to a decentralized, digital, and green grid architecture. The recovery plan emphasizes the replacement of obsolete assets with modern substation automation, modular transformer units, and resilient transmission design. Critical to this vision is the rebuilding of transformer and switchgear infrastructure, as substations are essential to grid recovery, voltage stability, and reconnecting industrial demand centers. International donors are financing Ukraine's grid rehabilitation with a focus on substations and transformers. The World Bank has provided a USD200m grant for essential energy repairs, and the EBRD has committed around EUR300m in sovereign-backed loans to support Ukrenergo's transmission network restoration.

These funds are directed toward replacing critical infrastructure, including transformer equipment, to restore grid stability and support future modernization.

Potential Valuation

We assume 25–30% of Ukraine's power infrastructure restoration budget will target substations, transformers, and related grid control systems. This implies a potential addressable market of USD12–14bn for transformer-related infrastructure over a multi-year horizon.

China currently dominates transformer imports into Ukraine, accounting for more than 80% of certain product segments. Nonetheless, Ukraine's ambitions to align with EU technical standards and diversify supplier risk could open limited space for alternative manufacturers. Opportunities may increase in cases where European funding mechanisms or donor mandates promote procurement diversification. Furthermore, company believes the relationship they formed over the conflict period to be conducive to favorable long term business prospects.

Assuming Astor captures a conservative 3-5% share of Ukraine's transformer rehabilitation market, this would imply cumulative revenues of USD175–500m over a 5–7 year period. Due to pressing energy shortfalls, we anticipate procurement demand to be more front-loaded, with initial tenders likely focused on key urban and industrial nodes.

We apply a high-risk adjustment to any projected revenue streams from Ukraine, reflecting political, operational, and contractual risks inherent in post-conflict environments. Using a risk-weighted discount rate in the range of 40%, to account for uncertainty, we estimate the net present value (NPV) of the Ukrainian transformer opportunity to be between USD50–100m, subject to volatility in project implementation and funding flows.

**Figure 33: Ukraine NPV**

| Ukraine | 2026E | 2027E | 2028E | 2029E | 2030E | 2031E | 2032E | 2033E | 2034E |
|---|---|---|---|---|---|---|---|---|---|
| Revenue | 60 | 50 | 45 | 47 | 50 | 52 | 55 | 57 | 60 |
| EBITDA | 18 | 15 | 13 | 14 | 15 | 16 | 16 | 17 | 18 |
| Equity Value | | | | | | | | | 83 |
| +Value/sh | | | | | | | | | 4 |

Source: Company data, UNLU & Co Research

# Financial Overview and Outlook

## Frontloaded Growth Supported by Capacity Ramp-Up and Export Expansion

Astor's revenue reached USD755m in 2024, up from USD196m in 2019, reflecting a strong historical CAGR of around 31% over the period, supported by robust demand in both domestic and export markets, as well as high capacity utilizations. The company benefits from a diversified customer base including TEIAS, electricity distribution companies, and EPC contractors, while exports have become an increasingly important growth driver. We forecast revenue to grow at a 9.8% CAGR between 2024A and 2034E, reaching USD1,927m by 2034. The bulk of this growth will be frontloaded, as new capacity additions come online in the early part of the forecast period and an order backlog of roughly USD800m is delivered over the next several years. Capacity utilization is projected to remain high at 90-95% in 1H25, with new capacity additions expected to come online from 2H25 onwards, supporting further growth as demand remains resilient.

Our assumptions include only modest price increases, with the majority of the growth expected to come from higher volumes and a favorable shift in the product mix towards power transformers and higher specification equipment. Export sales, which accounted for 38% of revenue in 2024, are expected to stabilize around 50% over the forecast horizon, supported by international expansion, Turquality incentives, and deeper participation in EPC-led infrastructure projects.

**Figure 34: Revenues**

| USDm | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025E | 2026E | 2027E | 2028E | 2029E |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **196** | **206** | **354** | **468** | **575** | **755** | **915** | **1,188** | **1,345** | **1,455** | **1,539** |
| *growth %* | | 5% | 72% | 32% | 23% | 31% | 21% | 30% | 13% | 8% | 6% |
| Distribution T. | 74 | 71 | 117 | 211 | 255 | 251 | 311 | 406 | 449 | 495 | 512 |
| Power T. | 54 | 87 | 158 | 139 | 172 | 326 | 368 | 424 | 481 | 509 | 533 |
| Switching | 24 | 25 | 56 | 94 | 103 | 127 | 163 | 231 | 280 | 310 | 347 |
| Trading / Others | 44 | 23 | 22 | 25 | 44 | 50 | 73 | 128 | 134 | 141 | 148 |
| Domestic | 80% | 81% | 82% | 79% | 59% | 62% | 60% | 49% | 46% | 45% | 45% |
| Export | 20% | 19% | 18% | 21% | 41% | 38% | 40% | 51% | 54% | 55% | 55% |

Source: Company data, UNLU & Co Research

We expect the strongest revenue growth between 2025 and 2027 as new production capacity is fully utilized. After this period, growth is expected to moderate as capacity utilization stabilizes at a high level and pricing conditions become more stable. Our forecasts do not incorporate potential upside from Astor's efforts to enter new markets such as the United States, as well as from reconstruction opportunities in Syria and Ukraine, both of which could provide significant additional demand for transformers and substation equipment. Inclusion of such opportunities could result in revenue exceeding our base case forecasts, especially in the latter half of the forecast period.

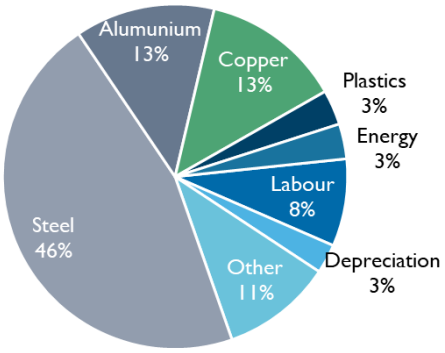
## High Raw Material Exposure Balanced by Internalization and Operational Efficiency

Astor's cost structure is dominated by raw materials, which account for roughly 83 percent of total costs, underscoring the company's exposure to commodity price fluctuations. Among these inputs, copper and aluminum each constitute approximately 16 percent of total costs. With the commissioning of a new conductor facility capable of producing 12,000 tons per year of enameled and paper-insulated copper and aluminum wire as well as continuously transposed conductor (CTC), we assume that Astor will achieve meaningful cost savings through vertical integration. As a result, we reduce our assumed copper and aluminum cost shares to 14 percent each following the facility's operational ramp-up, reflecting lower reliance on external suppliers and improved control over input quality and pricing.

Steel, and in particular grain-oriented electrical steel (GOES), represents another critical input for transformer manufacturing at around 60%. Although GOES prices are not transparently quoted in the market, management has stated that procurement has not posed challenges so far, as the company has maintained adequate inventory buffers to support production. At one stage, Astor Enerji even evaluated the feasibility of establishing its own GOES manufacturing facility.

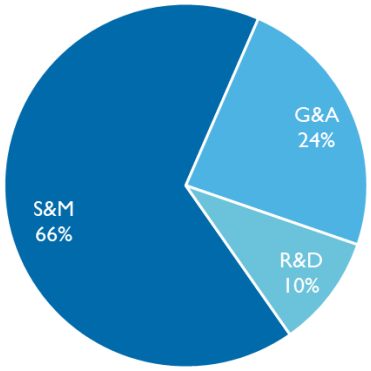
Since 2019, the gross profit margin has expanded from the low-20% range to a peak of 38% in 2023, supported by enhanced pricing power amid supply constraints in the market. With operating expenses maintained at controlled levels, these margin gains translated directly into EBITDA improvement. Over the same period, EBITDA grew at a compound annual rate of 41%. In our forecasts, we expect Astor to deliver a gross profit margin of approximately 32 percent in 2025. We project this margin to remain stable around this level until 2031, benefiting from cost reductions associated with the conductor facility and the company's ability to secure raw material supply under favorable conditions. After 2031, we incorporate a gradual decline in gross margin as the current supply-demand imbalance in the transformer market eases and competitive forces begin to weigh on pricing power.

**Figure 35: COGS Breakdown**




Source: Company data, UNLU & Co Research

**Figure 36: OPEX Breakdown**




Source: Company data, UNLU & Co Research

On the operating expense side, we anticipate that the new facility will contribute to a leaner cost structure relative to sales, as in-house conductor production should reduce logistical complexity and procurement-related overhead. While a significant share of revenues are in export markets, operating expenses are largely TL-denominated, so we do not expect material margin pressure from exchange rate movements under our base TL/USD assumptions. Consequently, we forecast the opex margin to remain in a narrow range between 5.6 and 6 percent throughout the forecast period.

**Figure 37: COGS, OPEX and EBITDA**

| USDm | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025E | 2026E | 2027E | 2028E | 2029E |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **196** | **206** | **354** | **468** | **575** | **755** | **915** | **1,188** | **1,345** | **1,455** | **1,539** |
| **COGS** | **152** | **145** | **254** | **326** | **355** | **494** | **622** | **807** | **909** | **988** | **1,050** |
| *growth %* | | -4% | 75% | 28% | 9% | 39% | 26% | 30% | 13% | 9% | 6% |
| **Gross Profit** | **44** | **60** | **99** | **142** | **220** | **261** | **292** | **382** | **435** | **466** | **489** |
| *margin %* | 22% | 29% | 28% | 30% | 38% | 35% | 32% | 32% | 32% | 32% | 32% |
| **OPEX** | **7** | **11** | **12** | **24** | **34** | **46** | **55** | **68** | **76** | **82** | **86** |
| *margin %* | 4% | 5% | 3% | 5% | 6% | 6% | 6% | 6% | 6% | 6% | 6% |
| EBIT | 37 | 49 | 87 | 118 | 186 | 214 | 237 | 313 | 359 | 384 | 402 |
| **EBITDA** | **43** | **57** | **94** | **123** | **197** | **239** | **272** | **352** | **401** | **430** | **450** |
| *growth %* | | 34% | 64% | 30% | 60% | 21% | 14% | 29% | 14% | 7% | 5% |
| *margin %* | 22% | 28% | 27% | 26% | 34% | 32% | 30% | 30% | 30% | 30% | 29% |

Source: Company data, UNLU & Co Research

EBITDA is expected to grow broadly in line with revenue at a 9.3% CAGR, from USD272m in 2025 to USD581m in 2034, assuming a stable EBITDA margin of around 30% over the forecast period. We do not forecast a material increase in margins, as we expect pricing and cost dynamics to stabilize in the medium term, with competitive pressures likely to rise as additional capacity investments by peers come

online. This environment should limit meaningful margin expansion despite the higher production volumes and improved product mix.

Net income is forecast to grow from USD133m in 2024 to USD339m in 2034, implying a steady upward trend over the period. Growth is stronger in the early years as new capacity ramps up, with net income reaching USD310m by 2027, then stabilizing in the USD320–350m range as capacity utilization normalizes and competitive pressures limit further margin expansion.

**Figure 38: WC, capex and net debt**

| USDm | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025E | 2026E | 2027E | 2028E | 2029E |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Receivable Days | 155 | 104 | 107 | 177 | 128 | 90 | 105 | 105 | 105 | 105 | 105 |
| Inventory Days | 75 | 118 | 59 | 127 | 53 | 60 | 65 | 70 | 75 | 75 | 75 |
| Pre-Paid Expenses % | 35% | 49% | 52% | 96% | 100% | 50% | 40% | 40% | 40% | 40% | 40% |
| Payable Days | 178 | 96 | 50 | 93 | 59 | 35 | 40 | 45 | 50 | 55 | 60 |
| Deferred Income % | 8% | 3% | 3% | 10% | 15% | 14% | 13% | 12% | 12% | 11% | 11% |
| Trade Receivables | 83 | 58 | 104 | 227 | 201 | 185 | 263 | 342 | 387 | 418 | 443 |
| Inventories | 31 | 47 | 41 | 114 | 51 | 81 | 111 | 155 | 187 | 203 | 216 |
| Pre-Paid Expenses | 7 | 11 | 13 | 60 | 105 | 131 | 16 | 16 | 16 | 16 | 40 |
| Trade Payables | 74 | 38 | 35 | 83 | 57 | 48 | 68 | 99 | 125 | 149 | 173 |
| Deferred Income | 17 | 11 | 15 | 55 | 113 | 157 | 149 | 161 | 167 | 169 | 178 |
| **Working Capital** | **31** | **67** | **108** | **263** | **187** | **193** | **173** | **252** | **298** | **319** | **348** |
| **WC / Revenues** | 16% | 32% | 30% | 56% | 33% | 26% | 19% | 21% | 22% | 22% | 23% |
| | | | | | | | | | | | |
| **Capex** | **12** | **21** | **22** | **24** | **62** | **105** | **112** | **40** | **40** | **40** | **40** |
| Capex / Sales | 6% | 10% | 6% | 5% | 11% | 14% | 12% | 3% | 3% | 3% | 3% |
| | | | | | | | | | | | |
| **Net Debt** | **55** | **72** | **116** | **43** | **-27** | **-104** | **-82** | **-240** | **-312** | **-409** | **-660** |
| Net Debt / EBITDA (: | 1.3 | 1.3 | 1.2 | 0.4 | -0.1 | -0.4 | -0.3 | -0.7 | -0.8 | -1.0 | -1.5 |

Source: Company data, UNLU & Co Research

The company's high capacity utilization and market share expansion strategy have contributed to fluctuations in working capital over recent years. Efforts to secure supply availability led to periods of elevated inventory levels, while trade receivables also exhibited significant volatility. Concurrently, payable days shortened between 2019 and 2024, reducing the extent of supplier financing. As a result, working capital requirements as a share of revenue increased sharply from 16% in 2019 to 56% in 2022. This ratio has since begun to normalize, reflecting improved balance between operational growth and liquidity management. Working capital is expected to remain stable over the forecast period, with the cash conversion cycle supported by advance payments from customers. Payments are typically collected throughout the production period, which reduces payment risk and supports cash flow predictability. This structure allows the company to fund operations efficiently despite growth in volumes. Capital expenditures are projected to rise significantly in 2025 and subsequent years as the investment cycle accelerates to expand production capacity, with another capex peak expected around 2030 when a new investment cycle is projected to begin. Despite this increase in capex, the company is expected to maintain a net cash position, supported by strong operating cash flows.

# Valuation

We used a blended valuation model, assigning 60% weight to discounted cash flow analysis and 40% to peer comparison. Our USD-based DCF valuation is based on a 10-year forecast period and a 4% terminal growth rate. Inputs to our c.10.5% WACC estimate are 7.5% risk-free-rate, 6.0% equity risk premium and 1.0 Beta. We included EBITDA without any adjustments. In peer comparison analysis, we employed the target value derived from peer median of 2026 EV/EBITDA with a 10% discount. We include EV charging stations as total investment value, and a discounted NPV of solar power plants. Our DCF analysis points to a USD3,872m market value, while our multiple analysis implies USD4,961m. Thus, we came up with **a target price of TL213/share**. Additionally, we present potential effects of US, Syria and Ukraine on the valuation without including them in our target price.

**Figure 39: Valuation Summary**

| Valuation | Value (USDm) | Weight | Weighted Value |
|---|---|---|---|
| DCF | 3,872 | 60% | 2,323 |
| Peer Comparison | 4,961 | 40% | 1,984 |
| Blended 12M Target Mcap - USD | | | 4,308 |
| USD/TL (1Y FW) | | | 49.45 |
| Blended 12M Target Mcap - TL | | | 213,010 |
| Number of Shares (m) | | | 998 |
| 12M Target Price - (TL) | | | 213 |
| Current Price | | | 108.1 |
| **Upside Potential** | | | **97%** |

Source: UNLU & Co estimates

**Figure 40: Astor DCF Valuation**

| USDm | 2025E | 2026E | 2027E | 2028E | 2029E | 2030E | 2031E | 2032E | 2033E | 2034E |
|---|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **915** | **1,188** | **1,345** | **1,455** | **1,539** | **1,616** | **1,680** | **1,745** | **1,835** | **1,927** |
| *- growth* | *21.2%* | *29.9%* | *13.2%* | *8.2%* | *5.8%* | *5.0%* | *3.9%* | *3.8%* | *5.2%* | *5.0%* |
| **EBITDA** | **272** | **352** | **401** | **430** | **450** | **489** | **519** | **520** | **547** | **581** |
| *- margin* | *29.7%* | *29.6%* | *29.9%* | *29.6%* | *29.2%* | *30.3%* | *30.9%* | *29.8%* | *29.8%* | *30.2%* |
| (+) Tax | -59 | -78 | -90 | -96 | -101 | -108 | -111 | -108 | -111 | -114 |
| (-) Change in working capital | -19 | 79 | 46 | 21 | 29 | 17 | -7 | 12 | 51 | 22 |
| (-) Capex | 112 | 40 | 40 | 40 | 40 | 100 | 100 | 50 | 50 | 131 |
| **FCF** | 120 | 155 | 226 | 273 | 281 | 264 | 314 | 350 | 335 | 315 |
| *FCF Revenues* | *13.1%* | *13.1%* | *16.8%* | *18.7%* | *18.2%* | *16.4%* | *18.7%* | *20.1%* | *18.3%* | *16.3%* |
| *Discount factor* | *1.0* | *1.1* | *1.2* | *1.3* | *1.5* | *1.6* | *1.8* | *2.0* | *2.2* | *2.4* |
| **Discounted FCF** | **120** | **141** | **185** | **203** | **190** | **162** | **174** | **175** | **151** | **129** |
| Risk-free rate | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% | 7.5% |
| Beta | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Equity risk premium | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| Cost of equity | 13.5% | 13.5% | 13.5% | 13.5% | 13.5% | 13.5% | 13.5% | 13.5% | 13.5% | 13.5% |
| Cost of debt | 8.5% | 8.5% | 8.5% | 8.5% | 8.5% | 8.5% | 8.5% | 8.5% | 8.5% | 8.5% |
| Debt/equity ratio | *40.0%* | *45.0%* | *45.0%* | *45.0%* | *45.0%* | *45.0%* | *40.0%* | *40.0%* | *40.0%* | *40.0%* |
| Tax rate | 25% | 25% | 25% | 25% | 25% | 25% | 25% | 25% | 25% | 25% |
| WACC | 10.7% | 10.3% | 10.3% | 10.3% | 10.3% | 10.3% | 10.7% | 10.7% | 10.7% | 10.7% |
| *Terminal growth rate* | | | | | | | | | | *4.0%* |
| 2025E-34E NAV | 1,631 | | | | | | | | | |
| Terminal value | 2,013 | | | | | | | | | |
| Enterprise value | 3,643 | | | | | | | | | |
| (+) Book Value of Car Charging St | 17 | | | | | | | | | |
| (+) SPP Investments | 15 | | | | | | | | | |
| (+) Net cash (1H25) | 212 | | | | | | | | | |
| Equity value | 3,872 | | | | | | | | | |
| Target Price (USD/sh) | 3.9 | | | | | | | | | |
| **Target Price (TL/sh)** | **192** | | | | | | | | | |
| Current Price | 108 | | | | | | | | | |
| **Upside Potential** | **77%** | | | | | | | | | |

| ***Not included*** | USD Value | +TL Value/sh |
|---|---|---|
| NPV of US | 355 | 18 |
| NPV of Syria | 125 | 6 |
| NPV of Ukraine | 83 | 4 |

Source: Company data, UNLU & Co Research

**Figure 41: Peer comparison**

| Company Name | MCAP USDm | P/E 2025E | P/E 2026E | EV/EBITDA 2025E | EV/EBITDA 2026E | EBITDA margin 2025E | EBITDA margin 2026E | Dividend Yield 2025E | Dividend Yield 2026E |
|---|---|---|---|---|---|---|---|---|---|
| Schneider Electric SE | 149,780 | 25.2 | 22.3 | 16.1 | 14.6 | 21.0% | 21.6% | 1.9% | 2.1% |
| Eaton Corp PLC | 141,047 | 30.0 | 26.6 | 22.9 | 20.4 | 23.7% | 24.4% | 1.1% | 1.2% |
| ABB Ltd | 123,765 | 26.0 | 24.0 | 17.9 | 16.3 | 20.2% | 20.6% | 1.5% | 1.6% |
| Siemens Energy AG | 96,814 | 70.9 | 34.4 | 21.3 | 13.9 | 9.4% | 12.9% | 0.4% | 1.0% |
| Mitsubishi Electric Corp | 52,447 | 23.6 | 21.6 | 11.7 | 11.2 | 11.6% | 11.9% | 1.4% | 1.5% |
| HD Hyundai Electric Co Ltd | 12,334 | 25.3 | 20.5 | 17.1 | 13.8 | 24.0% | 24.9% | 1.2% | 1.5% |
| CG Power & Industrial Solution | 11,837 | 99.7 | 82.5 | 75.8 | 55.8 | 13.6% | 14.0% | 0.2% | 0.3% |
| Bharat Heavy Electricals Ltd | 8,859 | 82.7 | 38.1 | 50.7 | 28.5 | 5.0% | 7.2% | 0.4% | 0.5% |
| Hyosung Heavy Industries Corp | 8,133 | 27.9 | 21.0 | 17.8 | 13.6 | 11.9% | 13.4% | 0.6% | 0.7% |
| Fortune Electric Co Ltd | 6,981 | 39.6 | 31.3 | 32.0 | 23.2 | 25.1% | 28.4% | 1.5% | 1.8% |
| Ningbo Sanxing Medical Electri | 4,775 | 12.0 | 9.9 | 8.8 | 7.0 | 21.3% | 21.8% | 4.4% | 5.5% |
| Apar Industries Ltd | 4,042 | 43.5 | 36.8 | 22.8 | 19.5 | 8.3% | 8.3% | 0.8% | 0.7% |
| Sanil Electric Co Ltd | 2,521 | 25.9 | 20.7 | 19.4 | 14.9 | 34.2% | 32.9% | 0.5% | 0.7% |
| Huaming Power Equipment Co Ltd | 2,508 | 25.2 | 21.7 | 19.5 | 16.4 | 35.2% | 36.3% | 2.6% | 3.0% |
| Daihen Corp | 1,389 | 15.6 | 14.6 | 11.8 | n.a | 10.5% | 10.7% | 2.0% | 2.1% |
| Hammond Power Solutions Inc | 1,125 | 19.4 | 17.2 | 12.0 | 10.9 | 15.3% | 16.4% | 0.8% | 0.8% |
| **Median** | | **25.9** | **22.0** | **18.7** | **14.9** | **17.7%** | **18.5%** | **1.2%** | **1.3%** |
| Astor | 2,196 | 10.7 | 6.9 | 9.4 | 7.1 | 29.7% | 29.6% | 1.8% | 7.1% |
| *Premium/(Discount)* | | *-59%* | *-68%* | *-50%* | *-52%* | *68%* | *60%* | | |

Source: Bloomberg data and UNLU & Co estimates.

*Companies Mentioned (Price as of 12 August 2025)*
Company Name (ASTOR.IS, RATING BUY, TP TL213)
Company Name (EKOS.IS, NOT RATED)
Company Name (ULUSE.IS, NOT RATED)
Company Name (EUPWR.IS, NOT RATED)
Company Name (EMKEL.IS, NOT RATED)

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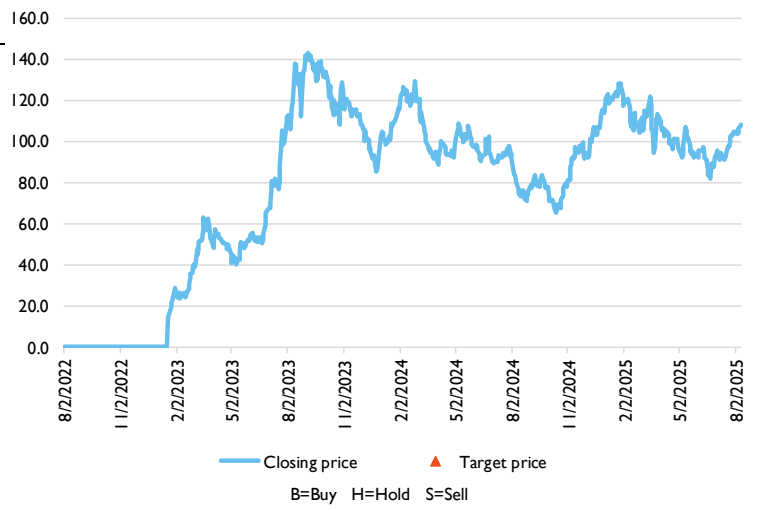
| ASTOR.IS Date | Closing Price | Target Price | Rating | Initiation/ Assumption |
|---|---|---|---|---|
| 8/13/2025 | | **213.00** | **BUY** | |

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|---|---|---|---|---|
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