

# Aluminium Conductor Steel-reinforced Cable (ACSR) Market To Hit USD 4.0 Billion by 2034

Aluminium Conductor Steel-reinforced Cable (ACSR) Market size is expected to be USD 4.0 Bn by 2034, and USD 3.2 Bn in 2024, at a CAGR of 2.2% from 2025 to 2034.

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Report Overview

The Global [Aluminium Conductor Steel-reinforced Cable \(ACSR\) Market](#)

has been witnessing substantial

growth, driven by its pivotal role in the power transmission and distribution sector. ACSR cables, known for their high tensile strength and durability, combine the lightweight properties of aluminum with the robustness of steel, making them an ideal choice for long-distance power distribution and high-tension electrical lines.

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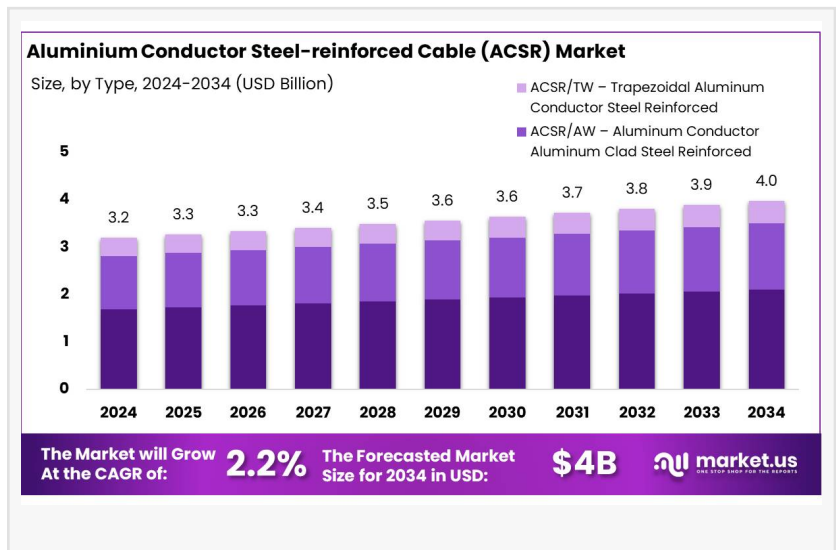
Asia Pacific region led the Aluminium Conductor Steel-reinforced (ACSR) cable market, securing a 46.90% share with a market value of USD 1.5 billion”

*Tajammul Pangarkar*

ACSR cables are extensively utilized in overhead power lines due to their ability to carry large electrical currents over long distances with minimal loss of energy. This efficiency is particularly critical as the global energy demand continues to surge, propelled by rapid industrialization and urbanization in emerging economies. The increasing investments in infrastructure development projects, especially in regions like Asia-Pacific and Africa,

have further augmented the demand for reliable and efficient power transmission solutions, thereby bolstering the ACSR market growth.

The industrial scenario of the ACSR market is highly competitive and fragmented with numerous players operating on a global scale. Key manufacturers are strategically expanding their production capacities and investing in R&D to enhance the efficiency and functionality of ACSR cables. Innovations focused on improving the corrosion resistance of these cables and reducing their weight further are ongoing, which are anticipated to open new avenues for the application



of ACSR cables.

Driving factors for the ACSR market include the robust expansion of the power sector, governmental policies favoring infrastructure growth, and the rising need for renewable energy integration into the grid. As countries around the world are pushing towards renewable sources like solar and wind energy, the requirement for ACSR cables is expected to escalate. These cables are crucial for connecting renewable energy sources with national grids to ensure the stability and reliability of energy supply.

The shift towards upgrading aging power infrastructure in developed countries and the construction of new power lines in developing regions are contributing to the market expansion.

The push from governments worldwide to enhance rural

electrification rates is also a significant growth driver. For instance, initiatives aimed at expanding the reach of electricity in remote areas are likely to increase the deployment of ACSR cables.

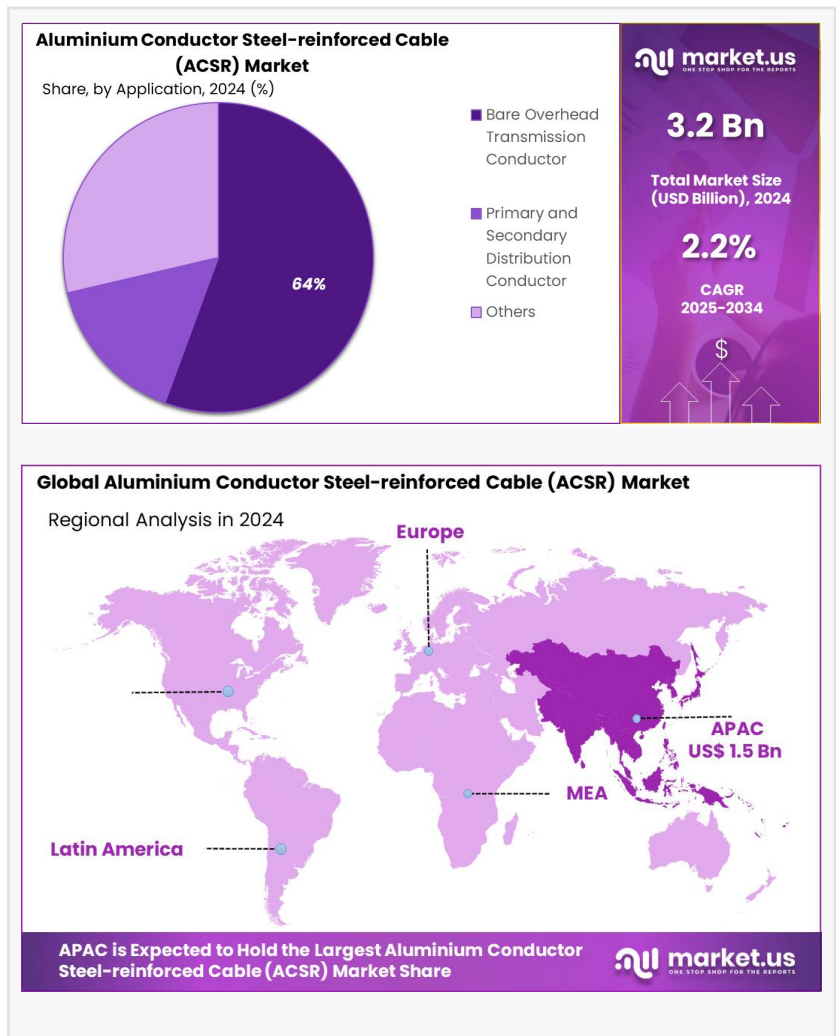
Future growth opportunities in the ACSR market are linked with the advancements in cable technology and the increasing emphasis on energy efficiency. The development of ultra-high voltage transmission lines, which require cables that can handle higher currents and longer spans, presents a lucrative prospect for the ACSR market. Additionally, the integration of smart grid technology, which demands high-performance transmission mediums, is expected to provide a substantial push to the market.

For a deeper understanding, click on the sample report link:

<https://market.us/report/aluminium-conductor-steel-reinforced-cable-acsr-market/free-sample/>

## Key Takeaways

- Aluminium Conductor Steel-reinforced Cable (ACSR) Market size is expected to be worth around USD 4.0 billion by 2034, from USD 3.2 Bn in 2024, growing at a CAGR of 2.2% during the forecast period from 2025 to 2034.



- In 2024, Aluminium Conductor Steel Reinforced (ACSR) cables maintained a dominant market position, accounting for over 53.60% of the total share.
- In 2024, the high voltage segment led the Aluminium Conductor Steel-reinforced (ACSR) cable market, securing a market share exceeding 48.30%.
- The 400 - 600 A segment emerged as the dominant category in the Aluminium Conductor Steel-reinforced (ACSR) cable market in 2024, capturing over 38.20% of the share.
- The Bare Overhead Transmission Conductor segment dominated the Aluminium Conductor Steel-reinforced (ACSR) cable market in 2024, commanding over 64.30% of the share.
- In 2024, the Asia Pacific region led the Aluminium Conductor Steel-reinforced (ACSR) cable market, securing a 46.90% share with a market value of USD 1.5 billion.

### Aluminium Conductor Steel-reinforced Cable (ACSR) Top Trends

- **Smart Grid Integration:** There's a rising trend of integrating smart grid technologies, which enhances the demand for ACSR cables due to their ability to fit into advanced power transmission networks. This integration supports efficient data handling and power distribution in modernized grid setups.
- **Enhanced Material Properties:** Innovations in material science are leading to the development of ACSR cables with improved attributes like better conductivity and reduced weight. These enhancements are expected to lower long-term operational costs and boost the efficiency of power transmission systems.
- **Renewable Energy Projects:** The global shift towards renewable energy sources, such as wind and solar, is driving the demand for ACSR cables. These cables are crucial for connecting renewable energy installations with the main power grids, ensuring reliable and efficient energy flow across vast distances.
- **High Voltage Applications:** ACSR cables are increasingly used in high voltage applications due to their ability to handle significant electrical loads over long distances. This capability is vital for supporting the expansion of high-voltage transmission lines needed for wide-area network reliability.
- **Cost Efficiency:** Due to their design, ACSR cables offer cost benefits over alternatives like copper cables, especially in long-distance and high-load applications. This makes them a preferred choice for utility companies aiming to optimize infrastructure investments.

### Key Market Segments

## By Type

In 2024, Aluminium Conductor Steel Reinforced (ACSR) cables maintained a dominant market position, accounting for over 53.60% of the total share. These conductors are highly preferred for their superior strength and conductivity, making them essential for long-distance power transmission. The ACSR/AW variant, featuring an aluminum-clad steel reinforcement, is particularly valued for its enhanced corrosion resistance, making it ideal for coastal and industrial applications. Additionally, the ACSR/TW variant, designed with trapezoidal-shaped aluminum wires, optimizes current-carrying capacity while reducing energy loss, making it a preferred choice for densely populated or high-energy demand areas. This segmentation highlights the adaptability of ACSR cables to various operational environments and applications.

## By Voltage Rating

In 2024, the high voltage segment led the Aluminium Conductor Steel-reinforced (ACSR) cable market, securing a market share exceeding 48.30%. High-voltage ACSR cables play a critical role in long-distance and high-load power transmission, forming the backbone of national grids. Meanwhile, medium voltage ACSR cables serve urban and regional distribution networks, ensuring efficient power delivery to end users. Although less prevalent, extra-high voltage ACSR cables are indispensable for ultra-long-distance transmission, where minimizing energy loss is paramount. This classification underscores the essential role of ACSR cables in diverse power transmission infrastructures.

## By Current Capacity

The 400 - 600 A segment emerged as the dominant category in the Aluminium Conductor Steel-reinforced (ACSR) cable market in 2024, capturing over 38.20% of the share. These cables are well-suited for mid to large-scale utility and industrial applications that demand higher current capacities for efficient power distribution. Lower capacity segments, including cables below 200 A and those in the 200 - 400 A range, cater to lower power demand environments. Conversely, cables exceeding 600 A are engineered for heavy-duty applications, including major power transmission lines requiring robust, high-capacity conduits. This segmentation demonstrates the diverse capabilities of ACSR cables in fulfilling varied electricity transmission requirements.

## By Application

The Bare Overhead Transmission Conductor segment dominated the Aluminium Conductor Steel-reinforced (ACSR) cable market in 2024, commanding over 64.30% of the share. These conductors are crucial for long-distance electricity transmission, reinforcing their fundamental role in national power grids. Additionally, the Primary and Secondary Distribution Conductor segment serves local and regional distribution networks, ensuring effective electricity delivery to

consumers. Other specialized applications exist within industrial and infrastructure projects, reflecting the versatility of ACSR cables in addressing a broad spectrum of electrical needs.

## Key Market Segments List

### By Type

- Aluminium Conductor Steel Reinforced (ACSR)
- ACSR/AW – Aluminum Conductor Aluminum Clad Steel Reinforced
- ACSR/TW – Trapezoidal Aluminum Conductor Steel Reinforced

### By Voltage Rating

- Medium
- High
- Extra High

### By Current Capacity

- Below 200 A
- 200 – 400 A
- 400 – 600 A
- Above 600 A

### By Application

- Bare Overhead Transmission Conductor
- Primary and Secondary Distribution Conductor
- Others

## Regional Analysis

In 2024, the Asia Pacific region led the Aluminium Conductor Steel-reinforced (ACSR) cable market, securing a 46.90% share with a market value of USD 1.5 billion. This dominance is fueled by large-scale infrastructure development and rapid industrialization, particularly in China and India. North America and Europe also maintain significant market shares, driven by efforts to modernize aging power grids and integrate renewable energy solutions. Meanwhile, the Middle East & Africa, and Latin America are witnessing growth, primarily due to increasing energy demands and government initiatives to expand electricity access. Although these regions currently represent smaller market shares, their growth potential remains promising. The strong market presence of the Asia Pacific region underscores its pivotal role in global ACSR cable demand, driven by both volume and strategic advancements in power transmission.

## Regulations On the Aluminium Conductor Steel-reinforced Cable (ACSR) Market

- **ASTM Standards:** ACSR cables are manufactured by several ASTM standards. These include ASTM B232 for concentric-lay-stranded aluminum conductors reinforced with steel, ASTM B230 for aluminum 1350-H19 wire for electrical purposes, and ASTM B498 for zinc-coated steel core wire for ACSR, ensuring high performance in electrical transmission.
- **Galvanization:** The steel core of ACSR cables is commonly galvanized to protect against corrosion. This enhances the durability of the cables, especially in harsh environmental conditions. Variants like galvanized steel, zinc-5% aluminum-mischmetal, and aluminum-clad steel are used depending on the required strength and corrosion resistance.
- **International Standards:** Besides ASTM, ACSR cables also adhere to other international standards such as BS EN 50189 and DIN 48201, which dictate specifications like the aluminum alloy and temper used, and the coating and grading of the steel wire. These standards ensure the cables can withstand mechanical loads and environmental challenges.
- **Temperature and Mechanical Load Regulations:** The design and materials of ACSR cables take into account factors like thermal and mechanical loading. The cables are built to maintain lower levels of sag and minimal thermal expansion under current load, which are crucial for maintaining structural integrity and functionality over time.
- **Compliance with Local Codes:** In many regions, ACSR installations must comply with local electrical codes and regulations that dictate specifics regarding overhead line installations, clearances, and safety measures. This ensures that ACSR cables are safe and reliable for both high-voltage transmission and everyday utility applications.

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### Key Players

- Nexans S.A.
- Prysmian
- Midal Cables Ltd.
- Southwire Company LLC
- Apar Industries Limited
- Qingdao Hanhe Cable Company Limited
- AFL Global
- Tongda Cable Co., Ltd.
- Taihan Cable & Solution Co., Ltd.
- CMI Limited
- Dynamic Cables Limited

- Yifang Electric Group Inc.
- Caledonian Cables Ltd.
- Sterlite Power
- LS VINA Cable & System
- POSCO

## Conclusion

The Aluminium Conductor Steel-reinforced Cable (ACSR) market remains a cornerstone in the global power transmission and distribution sector, thanks to its robust design and adaptability across various applications. ACSR cables, known for their high tensile strength and excellent conductivity, continue to be preferred for their cost-effectiveness and reliability in long-distance power transmission.

The market is supported by continuous advancements in materials and manufacturing processes, which enhance the cables' performance and environmental resilience. As industries worldwide pivot towards more sustainable and efficient energy solutions, the versatility and durability of ACSR cables ensure they remain integral to the development of modern electrical infrastructures. Looking ahead, the ongoing innovations and regulations shaping this market will likely foster growth and open new avenues for applications in both developed and emerging regions, solidifying ACSR's role in the future of global energy distribution.

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