

Colombia Power - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

Colombia Power Market Analysis

The Colombia Power Market size in terms of production capacity is expected to grow from 22.77 gigawatt in 2025 to 28 gigawatt by 2030, at a CAGR of 4.22% during the forecast period (2025-2030).

The growth path stems from policy-backed diversification away from hydropower dominance, rising industrial electrification, and stronger climate-resilience planning. Following the 2024 El Nino, natural-gas use for thermal generation swelled by 233%, exposing hydro-dependency risks and prompting accelerated solar and wind adoption. Robust auction pipelines, a supportive fiscal regime, and grid-modernisation projects by ISA Intercolombia further reinforce capacity additions, while emerging green-hydrogen hubs promise flexible demand that deepens electrification. On the demand side, industrial automation, data-centre roll-outs, and residential appliance uptake collectively lift annual electricity consumption, obliging regulators to streamline tariffs and expand sub-transmission assets.

Colombia Power Market Trends and Insights

Rising electricity demand from industrial & digital growth

Industrial electrification, data-centre proliferation, and Colombia's target of 63% internet penetration by 2026 are lifting power needs well above historical growth. Nationwide demand grew 5.48% year on year in February 2024 as automated mining,

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e-commerce logistics, and AI adoption widened the load profile. The Caribbean region tops consumption, mirroring its manufacturing parks and fiber-optic corridors. Rising loads stress 115 kV circuits, spurring utilities to accelerate capacitor-bank deployments and flexible demand programmes. These shifts fortify revenue visibility for forthcoming solar and gas-peaking projects, sustaining the Colombia power market expansion.

Government renewable-energy auctions & incentives (Law 1715)

The auction mechanism awarded 4.4 GW of new solar capacity in 2024 at a record-low USD 18.2/MWh, underscoring the cost edge of utility-scale photovoltaics. Law 1715 enhances returns through VAT exemptions, accelerated depreciation, and 20-year contracts that socialise demand risk. Recent reforms allow self-generators up to 5 MW to sell surplus power without wheeling charges, widening market entry. The Ministry of Mines and Energy expects an additional 2,550 MW of renewable capacity during 2025, creating 6,000 jobs and COP 3.7 trillion in economic value review. These levers underpin a resilient project pipeline feeding the Colombia power market.

Hydrology dependency & El Nino supply variability

The 2024 El Nino cut reservoir inflows sharply, forcing generators to treble gas burn and lifting spot prices 23% to COP 763.48/kWh. With 58.1% of capacity still hydro-based, drought spells expose consumers to volatility and generators to liquidity crunches. Research shows solar and wind complement the dry-season resource gap, yet rollout speed lags immediate system needs. Revised reservoir management rules and hedging via firm energy options partially offset the strain, but the risk remains material for the Colombia power market.

Other drivers and restraints analyzed in the detailed report include:

Abundant hydro resources & favourable renewable potential / Grid-modernisation investments led by ISA Intercolombia / Social opposition & indigenous consultations delaying RE projects /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Hydropower retained 58.1% of Colombia's power market share in 2024, providing the bulk of 22.77 GW installed capacity. Thermal assets stay indispensable for reliability, but rising gas prices and carbon constraints narrow their dispatch window. Wind resources in La Guajira promise scale yet face social bottlenecks, tilting near-term growth to solar. Solar capacity reached 1,773 MW by April 2024 after USD 1 billion flowed into 33 new plants.

The Colombia power market size for utility solar is expected to top 5 GW by 2027, while geothermal and biomass carve out niche roles backed by EDF and Ecopetrol pilots. Government plans envisage a 35% jump in renewable additions during 2025, underpinned by the USD 40 billion transition roadmap. Together, these trends cement an irreversible pivot toward a diversified, lower-carbon generation stack within the Colombia power market.

The Colombia Power Market Report is Segmented by Generation (Conventional Thermal, Hydroelectric, and Non-Hydro Renewable), Transmission and Distribution Voltage Levels (Transmission, Sub-Transmission, and Distribution), and End-User (Residential, Commercial and Industrial, and Utilities). The Market Size and Forecasts are Provided in Terms of Installed Capacity (GW).

List of Companies Covered in this Report:

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ISAGEN SA / Empresas Publicas de Medellin (EPM) / Celsia SA ESP / Enel Colombia / AES Colombia / TermoCandelaria Power Ltd / Grupo Energia Bogota (GEB) / ISA Intercolombia / Prime Energia Colombia / GENSA (Termopaipa) / Vatia Energia / Ventus Ingenieria SA / Grenergy Renovables Colombia / EDF Renewables Colombia / Canadian Solar Colombia / Trina Solar LatAm / Atlantica Sustainable Infrastructure / Ecopetrol - Generation Subsidiary / Grupo Celsia - EPSA / Siemens Energy Colombia /

Additional Benefits:

The market estimate (ME) sheet in Excel format /

3 months of analyst support /

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