

# The Global Graphite Market 2026-2036

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## Abstracts

The global graphite market is driven by the exponential growth of electric vehicle batteries while simultaneously confronting significant structural challenges. Graphite, available in both natural and synthetic forms, serves as an indispensable material across diverse industrial applications, with battery anodes for lithium-ion batteries emerging as the dominant growth driver reshaping the entire industry landscape. The market is characterized by stark regional concentration, with China maintaining overwhelming dominance across the value chain. Chinese producers control approximately 85-90% of spherical graphite production and over 95% of synthetic graphite anode material manufacturing. This concentration has prompted Western nations to pursue supply chain localization through substantial policy interventions, including the U.S. Inflation Reduction Act subsidies and escalating tariff protections. However, Chinese pricing effectively sets a global floor near or below ex-China production costs, creating severe margin pressures that threaten Western supply chain development absent sustained policy support.

Global graphite production has evolved significantly, with total output reaching approximately 700-750 kilotonnes annually for natural graphite. China produces 500-550 kt/yr, while African nations contribute 140-160 kt/yr. The battery sector now consumes 450-500 kt/yr for spherical graphite production, with non-battery applications accounting for 200-250 kt/yr. Looking forward, estimated global graphite production is projected to expand dramatically through 2035 to meet surging demand from the electric vehicle revolution and energy storage systems.

Demand dynamics reveal a fundamental market transformation. In 2020, battery anodes represented just 8% of graphite consumption, with traditional applications like refractories, electrodes, and lubricants dominating at 92%. By 2024, battery anodes captured 28% market share, and projections indicate this will surge to 62% by 2036. The electric vehicle sector provides the primary catalyst for this transformation. Each EV

battery requires 50-100 kilograms of graphite, making it the largest component by volume in any lithium-ion battery.

The construction of over 300 gigafactories across North America and Europe to service battery demands has catalyzed efforts to diversify supply chains away from Chinese dominance. However, fundamental challenges persist. Western graphite projects require sustained policy support—including IRA-style subsidies and escalating tariff protection—to compete against Chinese incumbents that benefit from scale advantages, feedstock optionality, and vertically integrated operations spanning mining through final anode production. Policy uncertainty, particularly around potential changes to U.S. support mechanisms, represents the single greatest risk to Western investments.

The *Global Graphite Market 2026-2036* provides in-depth analysis of the transformative decade ahead for natural and synthetic graphite industries worldwide. This comprehensive market intelligence report provides critical insights into the graphite supply chain, from mining and processing through end-use applications, with particular emphasis on the battery anode revolution driving unprecedented demand growth. As electric vehicle adoption accelerates and energy storage systems proliferate globally, graphite emerges as the cornerstone material of the energy transition, requiring the largest production increase of any battery additive through 2036. This essential industry reference examines the complex geopolitical landscape reshaping graphite markets, including China's dominant control of spherical graphite production, evolving U.S. tariff regimes and Inflation Reduction Act subsidies, Foreign Entity of Concern restrictions, and the urgent Western drive toward supply chain localization. The report delivers granular analysis of cost structures, pricing dynamics across natural flake, spherical, and synthetic graphite grades, and competitive positioning strategies for market participants navigating the critical 2025-2030 transformation period.

With detailed market sizing, demand forecasts through 2036, regional analysis covering Asia-Pacific, North America, Europe, and Brazil, plus comprehensive profiles of 102 leading global producers, this report serves as the definitive strategic planning tool for graphite miners, anode material manufacturers, battery producers, automotive OEMs, steel companies, investment analysts, policy makers, and supply chain professionals seeking to capitalize on the projected 310% demand growth transforming the industry.

### **Report Contents include:**

Critical material analysis: Market structure, Chinese dominance, and geopolitical fragmentation

Cost dynamics: Graphitization in-housing strategies and feedstock switching economics

Supply chain bifurcation: Chinese export controls, U.S. tariff evolution, and retaliatory measures

Market sizing and 2026-2036 growth trajectory analysis

Technology and substitution risk assessment (silicon anodes, sodium-ion, solid-state batteries)

Pricing dynamics for natural flake, spherical, and synthetic graphite (2020-2025 historical analysis)

Strategic implications and investment outlook framework

Three scenario analysis: Base case (gradual Western development), Bull case (accelerated independence), Bear case (policy reversal)

Equity market performance correlations and investment implications

Comprehensive graphite classification: Natural versus synthetic comparison

Natural graphite types: Flake (including spherical and expandable), amorphous, and crystalline vein

Processing methodologies and value chain analysis

Synthetic graphite production: Isostatic, extruded, vibration molded, die-molded classifications

Graphite electrode manufacturing and capacity analysis

Emerging production technologies and innovation pipeline

Recycling economics and projected volumes through 2036

Complete applications mapping across 20+ end-use markets

Detailed pricing analysis by graphite type (fine flake, spherical, large flake) with quarterly trends

Graphene market overview: Types, properties, applications, production capacities, and major producers

### Technology Threats and Market Disruptors

Silicon anode technology: Commercial status, adoption trajectory, market impact analysis

Sodium-ion batteries: Performance comparison, economic viability windows, market share projections

Solid-state battery technology: Technical challenges, penetration forecasts, timeline assessment

Alternative steelmaking technologies and EAF adoption trends

Substitution impact analysis and demand durability assessment through 2036

### Global Markets Analysis

Production analysis: Natural graphite mine production by country (2020-2036), synthetic graphite supply forecasts

China market dynamics: Domestic competition structure, strategic cost optimization, government subsidies, export control framework

U.S. policy evolution: Federal loan programs, IRA Clean Vehicle Credit, FEOC restrictions, comprehensive tariff analysis

Western market cost competitiveness: Ex-China natural anode cost structures, Chinese pricing as competitive floor

Global demand by end-use market (2016-2036): Battery anodes, refractories, graphite electrodes, lubricants, foundries, friction materials

Regional demand analysis: Asia-Pacific, North America, Europe, Brazil with supply-demand balance assessments

Market developments timeline (2020-2025): Major acquisitions, offtake agreements, capacity expansions

Factors aiding and hindering market growth

Main market players: Natural and synthetic graphite producer analysis

Supply chain mapping for battery and traditional markets

#### Application-Specific Analysis

Lithium-ion batteries: Gigafactory tracking (300+ facilities), anode material properties and specifications

Electric vehicle market: Recent trends, supply tightness, EV sales forecasts through 2036

Battery demand by chemistry and anode type (2024-2030)

Global anode market structure and competitive dynamics

Historical anode pricing trends and major producer competitive positioning

Refractory manufacturing: Steel market trends, carbon sources, EAF adoption analysis

Graphite shapes for specialized applications

Electronics and thermal management materials

Fuel cells, nuclear applications, lubricants, friction materials

Flame retardants, solar and wind turbine applications

## Company Profiles

Production capacities, technology platforms, and product specifications

Strategic positioning, recent developments, and market focus

Financial backing, offtake agreements, and partnership structures

Project development timelines and commercialization status

Companies Profiled include (Alphabetical): Aben Resources, Alba Mineral Resources plc, Anovion Technologies, Anson Resources, Applied Graphite Technologies, Armadale Capital, Ashbury Carbons, Black Rock Mining Ltd., Blencowe Resources, BTR New Material Group Co. Ltd., Buxton Resources Limited, Canada Carbon Inc., Carbonscape, Ceylon Graphite Corp., China Minmetals Group (Heilongjiang) Graphite Industry Co., China Steel Chemical Corporation, Cocan (Hubei) Graphite Mill Inc., Doncarb Graphite LLC (EM Group), Eagle Graphite, EcoGraf Limited, Evolution Energy Minerals, Extrativa Metalquimica SA Grafite do Brasil, Evion Group Pty. Ltd., Fangda Carbon New Material Co. Ltd., First Graphene, Five-star New Material Technology Co. Ltd., Focus Graphite, FunktioMat Oy, Grafintec Oy, GrafTech International, Graphex Technologies LLC, Graphit Kropfmühl GmbH, Graphite COVA GmbH, Graphite India Limited (GIL), Graphite One Inc., Graphjet Technology, Gratomic Inc., Green Battery Minerals, Green Graphite Technologies, Greenwing Resources, HEG Limited, Heilongjiang Guangshengda New Material Technology Co. Ltd., Heilongjiang Aoyu Energy, Hexagon Energy Materials Ltd., Hubei Hengda Graphite Shareholding, Ibsiden, Infinity Stone Ventures Corporation, International Graphite Ltd., ITech Minerals Ltd., JFE Chemical Corp., Jixi Northeast Asia Mineral Resources Co. Ltd., Jixi Puchen Graphite Co. Ltd., Kaifeng Carbon, Leading Edge Materials, Lomiko Metals and more...

## Contents

### 1 EXECUTIVE SUMMARY

- 1.1 The Global Graphite Market: Critical Material at a Crossroads
  - 1.1.1 Market Structure and Chinese Dominance
  - 1.1.2 Cost Dynamics and the Synthetic Pivot
    - 1.1.2.1 Graphitisation In-Housing
    - 1.1.2.2 Feedstock Switching
  - 1.1.3 Geopolitical Fragmentation and Supply Chain Bifurcation
    - 1.1.3.1 Chinese Export Controls
    - 1.1.3.2 Escalating US Tariff Regime
    - 1.1.3.3 China's Counter-Tariffs
  - 1.1.4 Western Market Outlook: Reasons for Cautious Optimism
- 1.2 Market Sizing and Growth Trajectory
- 1.3 Technology and Substitution Risks
- 1.4 Pricing Dynamics and Market Pressures
- 1.5 Strategic Implications and Investment Outlook
- 1.6 Market Outlook: Navigating the 2025-2030 Transformation
  - 1.6.1 Base Case Scenario (60% probability): Gradual Western Supply Chain Development
  - 1.6.2 Bull Case Scenario (25% probability): Accelerated Western Independence
  - 1.6.3 Bear Case Scenario (15% probability): Policy Reversal and Western Retreat
  - 1.6.4 Structural Demand Growth Remains Robust Across Scenarios
  - 1.6.5 Price Outlook by Scenario
  - 1.6.6 Equity Market Performance Correlation

### 2 INTRODUCTION

- 2.1 Types of graphite
  - 2.1.1 Natural vs synthetic graphite
- 2.2 Natural graphite
  - 2.2.1 Processing
  - 2.2.2 Flake
    - 2.2.2.1 Grades
    - 2.2.2.2 Applications
    - 2.2.2.3 Spherical graphite
    - 2.2.2.4 Expandable graphite
  - 2.2.3 Amorphous graphite

- 2.2.3.1 Applications
- 2.2.4 Crystalline vein graphite
  - 2.2.4.1 Applications
- 2.3 Synthetic graphite
  - 2.3.1 Classification
    - 2.3.1.1 Primary synthetic graphite
    - 2.3.1.2 Secondary synthetic graphite
  - 2.3.2 Processing
    - 2.3.2.1 Processing for battery anodes
  - 2.3.3 Issues with synthetic graphite production
  - 2.3.4 Isostatic Graphite
    - 2.3.4.1 Description
    - 2.3.4.2 Markets
      - 2.3.4.3 Producers and production capacities
  - 2.3.5 Graphite electrodes
  - 2.3.6 Extruded Graphite
  - 2.3.7 Vibration Molded Graphite
  - 2.3.8 Die-molded graphite
- 2.4 New technologies
  - 2.4.1 Energy Efficiency Focus
  - 2.4.2 Environmental Drivers
  - 2.4.3 Recycling Reality Check
  - 2.4.4 Commercialization Barriers
  - 2.4.5 Market Impact Timeline
- 2.5 Recycling of graphite materials
- 2.6 Applications of graphite
- 2.7 Graphite pricing (ton)
  - 2.7.1 Pricing 2020-2025
    - 2.7.1.1 Fine Flake Graphite Prices
    - 2.7.1.2 Spherical Graphite Prices
    - 2.7.1.3 +32 Mesh Natural Flake Graphite Prices
    - 2.7.1.4 Large Flake
- 2.8 Graphene
  - 2.8.1 Overview
  - 2.8.2 Properties
  - 2.8.3 Types of graphene and prices
    - 2.8.3.1 CVD Graphene
    - 2.8.3.2 Graphene nanoplatelets
    - 2.8.3.3 Graphene oxide and reduced Graphene Oxide

- 2.8.4 Markets and applications
- 2.8.5 Graphene production capacities
- 2.8.6 Graphene producers
- 2.9 Technology Threats and Substitution Risks to Graphite Demand
  - 2.9.1 Overview of Alternative Technologies
  - 2.9.2 Silicon Anode Technology
  - 2.9.3 Sodium-Ion Battery Technology
  - 2.9.4 Solid-State Battery Technology
  - 2.9.5 Steel Production Technology
    - 2.9.5.1 Alternative Steelmaking Technologies
  - 2.9.6 Substitution Threat Risk Levels (2024-2036 Period)
  - 2.9.7 Graphite Demand Durability Through 2036

### **3 MARKETS FOR GRAPHITE**

- 3.1 Global production of graphite
  - 3.1.1 Market Dynamics and Demand Drivers (2024-2025)
    - 3.1.1.1 Steel Sector Weakness
    - 3.1.1.2 Inventory Overhang Impact
    - 3.1.1.3 Substitution Dynamics
    - 3.1.1.4 Ex-China Markets Maintain Natural Preference
  - 3.1.2 China dominance
    - 3.1.2.1 Domestic Market Competition Structure
    - 3.1.2.2 Strategic Cost Optimization (2021-2024)
    - 3.1.2.3 Government Support and Subsidy Structures
    - 3.1.2.4 China's Strategic Export Control Framework
    - 3.1.2.5 Practical Impact of Export Controls
  - 3.1.3 United States Subsidies, Loans, and Tariff Policy Evolution
    - 3.1.3.1 Federal Loan Guarantee Programs
    - 3.1.3.2 The Inflation Reduction Act (IRA) and Clean Vehicle Credit (CVC)
    - 3.1.3.3 FEOC Restrictions and Timeline Extensions
    - 3.1.3.4 Political Uncertainty - "One Big Beautiful Bill" and CVC Expiration
    - 3.1.3.5 Tariff Policy Evolution
    - 3.1.3.6 July 2025 - Preliminary AD Determination
    - 3.1.3.7 Chinese Retaliatory Measures
    - 3.1.3.8 Policy Sustainability Analysis
  - 3.1.4 Global mine production and reserves of natural graphite
  - 3.1.5 Global graphite production in tonnes, 2024-2036
    - 3.1.5.1 Natural Graphite

- 3.1.5.2 Synthetic Graphite
- 3.1.6 Western Market Cost Competitiveness Analysis
  - 3.1.6.1 Ex-China Natural Anode Cost Structure
  - 3.1.6.2 Chinese Pricing as Competitive Floor
  - 3.1.6.3 Policy Support Mechanisms Bridging the Gap
  - 3.1.6.4 Alternative Competitive Strategies
- 3.2 Global market demand for graphite by end use market 2016-2035, tonnes
  - 3.2.1 Battery Market Dominance
  - 3.2.2 Steel/Refractories Sector
  - 3.2.3 Mature Industrial Markets
- 3.3 Graphite market developments 2020-2025
- 3.4 Demand by region
  - 3.4.1 Asia-Pacific
  - 3.4.2 North America
  - 3.4.3 Europe
  - 3.4.4 Brazil
- 3.5 Factors that aid graphite market growth
- 3.6 Factors that hinder graphite market growth
- 3.7 Main market players
  - 3.7.1 Natural graphite
  - 3.7.2 Synthetic graphite
- 3.8 Market supply chain
- 3.9 Lithium-ion batteries
  - 3.9.1 Gigafactories
  - 3.9.2 Anode material in electric vehicles
    - 3.9.2.1 Properties
    - 3.9.2.2 Market demand
    - 3.9.2.3 Global Anode Market Structure and Competitive Dynamics
  - 3.9.3 Recent trends in the automotive market and EVs
  - 3.9.4 Higher costs and tight supply
  - 3.9.5 Forecast for EVs
- 3.10 Refractory manufacturing (Steel market)
  - 3.10.1 Steel market trends and graphite growth
  - 3.10.2 Carbon Sources for refractories
  - 3.10.3 Electric arc furnaces in steelmaking
    - 3.10.3.1 Recarburising
- 3.11 Graphite Shapes
- 3.12 Electronics
  - 3.12.1 Thermal management

3.13 Fuel Cells

3.14 Nuclear

3.15 Lubricants

3.16 Friction materials

3.17 Flame retardants

3.18 Solar and wind turbines

#### **4 COMPANY PROFILES (102 COMPANY PROFILES)**

#### **5 RESEARCH METHODOLOGY**

#### **6 REFERENCES**

## List Of Tables

### LIST OF TABLES

- Table 1. EV Market Projections.
- Table 2. Combined Graphite Demand Forecast.
- Table 3. Graphite Market Scenarios - Key Metrics Summary (2030)
- Table 4. Selected physical properties of graphite.
- Table 5. Characteristics of natural and synthetic graphite.
- Table 6. Comparison between Natural and Synthetic Graphite.
- Table 7. Natural graphite size categories, their advantages, average prices, and applications.
- Table 8. Classification of natural graphite with its characteristics.
- Table 9. Applications of flake graphite.
- Table 10. Amorphous graphite applications.
- Table 11. Crystalline vein graphite applications.
- Table 12. Characteristics of synthetic graphite.
- Table 13: Main markets and applications of isostatic graphite.
- Table 14. Current or planned production capacities for isostatic graphite.
- Table 15. Main graphite electrode producers and capacities (MT/year).
- Table 16. Extruded graphite applications.
- Table 17. Applications of Vibration Molded Graphite.
- Table 18. Applications of Die-molded graphite.
- Table 19. Emerging Graphite Production Technologies and Innovations.
- Table 20. Current Recycling Economics (2024-2025):
- Table 21. Recycled refractory graphite applications.
- Table 22. Projected Recycling Volumes.
- Table 23. Markets and applications of graphite.
- Table 24. Classification, application and price of graphite as a function of size.
- Table 25. Pricing by Graphite Type, 2020-2025.
- Table 26. Fine Flake Graphite Prices (-100 mesh, 90-97% C).
- Table 27. Spherical Graphite Prices (99.95% C).
- Table 28. Spherical Graphite Quality Grades and Applications.
- Table 29. +32 Mesh Natural Flake Graphite Prices (>500µm, 94-97% C).
- Table 30. Large Flake Premium Analysis.
- Table 31. Graphite Pricing Compression Analysis 2022-2024.
- Table 32. Properties of graphene, properties of competing materials, applications thereof.
- Table 33. Types of graphene and prices.

- Table 34. Applications of GO and rGO.
- Table 35. Markets, benefits and applications of graphene.
- Table 36. Main graphene producers by country, annual production capacities, types and main markets they sell into.
- Table 37. Graphene producers.
- Table 38. Current Commercial Status Silicon Anode Technology.
- Table 39. Silicon Anode Market Adoption Trajectory.
- Table 40. Current Commercial Status of Sodium-ion (Na-ion) batteries.
- Table 41. Sodium-ion (Na-ion) batteries Performance Comparison.
- Table 42. Sodium-ion (Na-ion) Economic Viability Window.
- Table 43. Sodium-ion (Na-ion) Batteries Market Share Projections.
- Table 44. Critical Technical Challenges for Solid-state batteries.
- Table 45. Market Penetration Projections for Solid-state batteries.
- Table 46. Substitution Impact Analysis.
- Table 47. Substitution Threat Risk Levels (2024-2036 Period).
- Table 48. Chinese Battery AAM Mix Evolution.
- Table 49. Chinese Graphite Anode Market Structure.
- Table 50. Chinese Graphitisation Cost Evolution 2021-2024.
- Table 51. Chinese Feedstock Cost Dynamics 2021-2024.
- Table 52. Examples of Graphite-Related Federal Support.
- Table 53. Potential Final Combined Tariffs (if affirmative final determinations).
- Table 54. Estimated global mine Production of natural graphite 2020-2025, by country (tons).
- Table 55. Global graphite production in tonnes, 2024-2036.
- Table 56. Natural Graphite Breakdown (2024 & 2036).
- Table 57. Synthetic Graphite Breakdown (2024 & 2036).
- Table 58. Typical cost breakdown for ex-China natural graphite AAM production (per tonne).
- Table 59. Synthetic Anode Cost Dynamics.
- Table 60. Ex-China Natural Anode Cost Structure Analysis.
- Table 61. Current and potential tariff structures.
- Table 62. US Graphite Tariff Evolution and Impact Analysis.
- Table 63. Landed Cost Impact (Chinese AAM @ US\$5,000-7,000/t DDP China).
- Table 64. Competitive Positioning Analysis.
- Table 65. Global Graphite Demand by End-Use Market 2020-2036 (tonnes).
- Table 66. End Use Market Share Evolution.
- Table 67. Graphite market developments 2020-2025.
- Table 68. Global Graphite Demand by Regional Market 2020-2036 (tonnes).
- Table 69. Asia-Pacific Graphite Demand by Application 2020-2036 (tonnes).

Table 70. North America Graphite Demand by Application 2020-2036 (tonnes)

Table 71. North America Supply vs Demand Balance (AAM only).

Table 72. Europe Graphite Demand by Application 2020-2036 (tonnes)

Table 73. Europe Supply vs Demand Gap (AAM, kt):

Table 74. Brazil Graphite Demand by Application 2020-2036 (tonnes)

Table 75. Brazil Supply-Demand Balance:

Table 76. Main natural graphite producers.

Table 77. Main synthetic graphite producers.

Table 78. Key minerals in an EV battery.

Table 79. Global Battery Demand by Chemistry and Anode Type (2024-2030).

Table 80. Current and planned gigafactories.

Table 81. Key Battery Anode Specifications.

Table 82. Historical Anode Pricing Trends (DDP China).

Table 83. Major Anode Producer Profiles and Competitive Positioning

Table 84. Overview of thermal management materials.

Table 85. Graphite production capacities by producer.

Table 86. Next Resources graphite flake products.

## List Of Figures

### LIST OF FIGURES

- Figure 1. Structure of graphite.
- Figure 2. Comparison of SEM micrographs of sphere-shaped natural graphite (NG; after several processing steps) and synthetic graphite (SG).
- Figure 3. Overview of graphite production, processing and applications.
- Figure 4. Flake graphite.
- Figure 5. Flake graphite production
- Figure 6. Amorphous graphite.
- Figure 7. Vein graphite.
- Figure 8: Isostatic pressed graphite.
- Figure 9. Extruded graphite rod.
- Figure 10. Vibration Molded Graphite.
- Figure 11. Die-molded graphite products.
- Figure 12. Graphene layer structure schematic.
- Figure 13. Illustrative procedure of the Scotch-tape based micromechanical cleavage of HOPG.
- Figure 14. Graphite and graphene.
- Figure 15. Types of CVD methods.
- Figure 16. Schematic of the manufacture of GnPs starting from natural graphite.
- Figure 17. Graphite market supply chain (battery market).
- Figure 18. 2 Graphite: Content and share of total cell weight, for common types of lithium-ion cells for battery-powered electric vehicles.
- Figure 19. Graphite as active anode material in lithium-ion cell.
- Figure 20. Global electric car sales and share of global car sales, 2010-2023.
- Figure 21. Schematic illustration of an EAF.

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