

Distributed Energy Resources

ANMD-MRS25-242 · Renewable Energy Integration

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

WHY THIS REPORT

Distributed energy resources (DERs) place generation, storage and flexible load behind the meter and at the grid edge across residential, C&I; and community scales. Distributed solar, storage and small wind/CHP shift power closer to demand — cutting losses, deferring grid upgrades and enabling self-consumption, resilience and grid services. The pay-off is measurable: lower bills, deferred network investment, resilience and aggregated grid value. This report is a comprehensive, decision-grade study of that market across DER type, scale, component, application, end user and business model, spanning history 2020–2024, a 2025 base year, a 2025–2032 forecast and long-term outlooks to 2035, 2040 and 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

The sustainability case is the report's backbone. Beyond operational performance, this market delivers measurable clean distributed generation, grid-upgrade deferral and community resilience, while storage circularity strengthens the resource-security story. The analysis applies double materiality, maps outcomes to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, and links contributions to SDGs 7, 11 and 13. Embodied carbon in PV and batteries, end-of-life circularity, and energy-equity and access are treated as material risks — with greenwashing and SDG-washing screens applied throughout.

Mapped Sustainable Development Goals:

<p>SDG 7 Affordable Clean Energy</p>	<p>SDG 11 Sustainable Cities</p>	<p>SDG 13 Climate Action</p>
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Framework alignment: Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

WHAT'S INSIDE AT A GLANCE

<p>53 Chapters</p>	<p>9 Report Parts</p>	<p>7 Regions Covered</p>	<p>40+ Country Markets</p>
<p>2025–32 Forecast Horizon</p>	<p>4 Forward Scenarios</p>	<p>25+ Companies Profiled</p>	<p>3 SDGs Mapped</p>

MARKET OVERVIEW

Distributed energy resources are moving from individual assets to coordinated fleets.

Demand is driven by retail-bill savings, resilience and the value of behind-the-meter flexibility, supported by maturing DERMS and aggregation. The market is read three ways — value, installed capacity (MW) and site count — and forecast under conservative, base, accelerated and disruption scenarios, with every projection resolved to the 2025 base year and each region reported separately rather than folded into Rest of World.

- North America leads adoption, anchored by the United States and Canada, where DER incentives, net metering and aggregation markets are most advanced.
- Europe scales on prosumers, with Germany, the Netherlands and the United Kingdom combining rooftop solar with storage and flexibility.
- Asia Pacific is the growth engine, as Australia, Japan and India expand distributed solar and storage at the grid edge.
- DER type and scale segment the value, across distributed solar, storage and small wind/CHP, and residential, C&I; and community scales, each with distinct economics.

REGIONAL OUTLOOK

Across the seven reporting regions, the report separates deployment leaders from high-growth and emerging markets, profiling named country sub-markets, policy regimes and project pipelines in each. Asia Pacific and North America anchor near-term volume; Europe leads on grid policy; while Latin America, Africa and the Middle East are assessed on their own merits — for energy access, grid expansion and decarbonisation — rather than aggregated away.

Region	Stage	Lead Country Markets & Drivers
Asia Pacific	Scale engine	China, India, Japan, Australia, South Korea — deployment scale, manufacturing, targets
North America	Innovation leader	United States, Canada — market reform, incentives, DER & storage growth
Europe	Policy leader	Germany, Spain, United Kingdom, Italy — grid codes, flexibility markets, decarbonisation
Latin America	Emerging	Brazil, Chile, Mexico — auctions, distributed solar, grid expansion
Africa	Frontier	South Africa, Kenya, Nigeria — energy access, minigrids, off-grid solar
Middle East	Frontier	Saudi Arabia, UAE — utility-scale renewables, diversification, sovereign investment

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
<ul style="list-style-type: none"> • Retail-bill savings & self-consumption • Grid-upgrade deferral & loss reduction • Resilience & backup-power demand • DER incentives & aggregation markets • DERMS, storage & inverter technology gains 	<ul style="list-style-type: none"> • Interconnection & approval complexity • Upfront CAPEX & financing access • Utility-tariff & net-metering uncertainty • PV & storage cost inflation • Coordination & visibility challenges

SEGMENTATION SNAPSHOT

By DER Type	Distributed solar · distributed storage · small wind/CHP
By Scale	Residential · C&I; · community
By Component	PV · storage · inverters · controls · software
By Application	Residential · C&I; · community scale
By End User	Homeowners · businesses · utilities · aggregators
By Business Model	Self-consumption · lease · PPA · aggregation

TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

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- › Chapter 1. Scope, Methodology and Report Architecture
- › Chapter 2. Industry Discovery Summary — Distributed Energy Resources
- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

PART II — MARKET INTELLIGENCE, SIZING, FORECASTING AND SEGMENTATION

- › Chapter 5. Industry Overview and Market Evolution
- › Chapter 6. Market Dynamics
- › Chapter 7. Global Market Size and Forecast, 2020–2032
- › Chapter 8. Market Segmentation Analysis
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- › Chapter 10. Pricing, Cost and Commercial Model Intelligence

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PART IV — TECHNOLOGY, INNOVATION AND CATEGORY-SPECIFIC INTELLIGENCE

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PART VII — SUPPLY CHAIN, POLICY, LEGAL, ECONOMICS AND FINANCE

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COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans established energy-technology majors, specialist software and hardware vendors, and turnkey integrators. Profiled players include Tesla, Inc., Enphase Energy, Inc., SolarEdge Technologies, Inc., Sunrun Inc. and Schneider Electric SE. Deal activity — aggregation partnerships, virtual-power-plant pilots and DER-financing platforms — signals a market consolidating around bankable, scalable models. Investment intelligence spans venture, growth, infrastructure and blended finance, green bonds and sustainability-linked instruments, culminating in a bankability assessment and investment verdict.

KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global distributed energy resources market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How do technology and adoption shifts change value versus legacy approaches?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the category align with the SDGs and disclosure regulation?

WHY ANMD — THE DIFFERENCE

Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG and natural-capital intelligence and a decision-ready bankability verdict in a single architecture.

- **Triangulated sizing** — every market read three ways so value, volume and installed-base views reconcile rather than conflict.
- **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, conditional investment verdict.

WHO SHOULD BUY THIS REPORT

Investors and infrastructure / PE funds, DER developers and aggregators, utilities and grid operators, OEMs and software vendors, lenders and procurement leaders, regulators and policymakers, and corporate strategy and ESG teams — alongside strategic corporate planners and decision-makers.

Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at www.anewmarketdynamics.com · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at www.anewmarketdynamics.com. The full detailed table of contents will be sent directly to your registered company email address.

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