Market Overview | Targets | Hydrogen Strategy | Auctions
Feed-in Tariffs | NDC | Investment Laws | AREP

24–25 GW
Total Installed Capacity

446 MW
RE Installed (End 2025)

2.6 GW
Under Construction

5–7%
Annual Demand Growth

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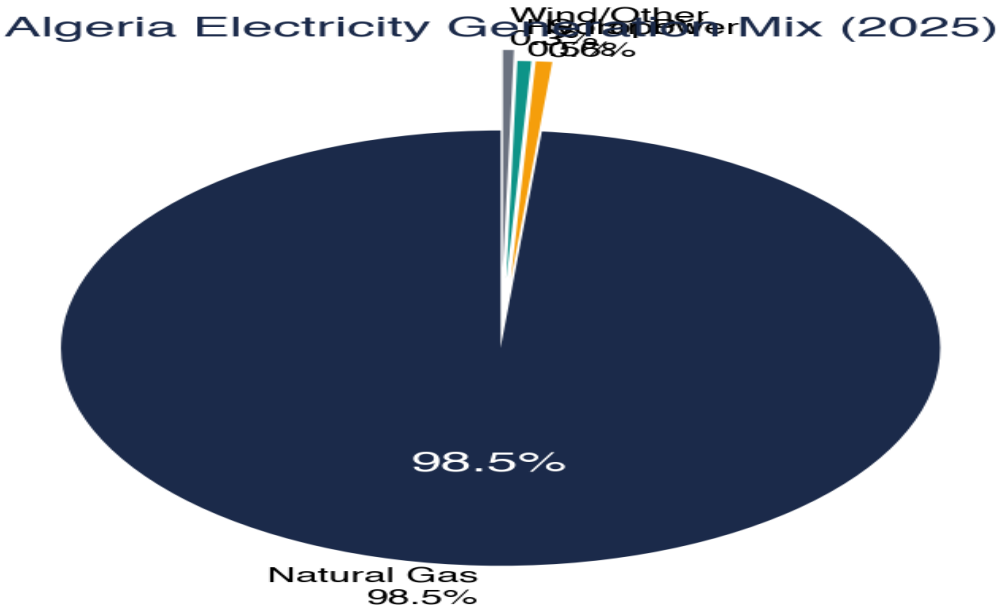
1. RENEWABLE ENERGY MARKET OVERVIEW

Algeria possesses one of the world's most formidable renewable energy resource endowments, with solar irradiance exceeding 2,500 kWh/m²/year across the Saharan interior and wind corridors capable of supporting utility-scale projects. Despite this, the country remains overwhelmingly dependent on natural gas, which accounts for 98.5% of electricity generation.



According to ESI-Africa (Feb 2026), Algeria's installed renewable capacity stood at **446 MW at end-2025**, with approximately **2.6 GW under construction** and **1.48 GW of solar capacity** expected to be commissioned by August 2026. The urgency for diversification has intensified as Algeria faces growing electricity supply-demand gaps, with load shedding reported during peak summer months in 2023 and 2024. CREG and Sonelgaz project annual demand growth of 5–7%.

Key Institutional Players

Entity	Role
CREG	Electricity & gas regulator; tariff-setting, licensing, RE market oversight
Sonelgaz	National vertically integrated utility (generation, transmission, distribution)
SKTM	Sonelgaz RE subsidiary; lead developer of 1% Program, Ghardaia complex
CDER	Applied R&D center; manages 60+ decentralized mini-PV plants
APRUE	National energy efficiency & RE promotion agency; program rollout support
Ministry of Energy & Mines	Lead policy ministry for RE & energy transition

Algeria's transmission grid, managed by GRTE (a Sonelgaz subsidiary), extends over 30,000 km but is concentrated in the northern Tell region. The southern Saharan zone — where solar irradiance is highest — remains largely disconnected, creating a spatial mismatch between generation potential and grid infrastructure.

2. RENEWABLE ENERGY TARGETS

Algeria's renewable energy ambition originated in the 2011 Programme National des Énergies Renouvelables (PNER), targeting 12 GW by 2025. In 2015 the program was revised to AREP (Algeria Renewable Energy Program) with a **22 GW target by 2030**, subsequently reinforced through renewable energy share targets.

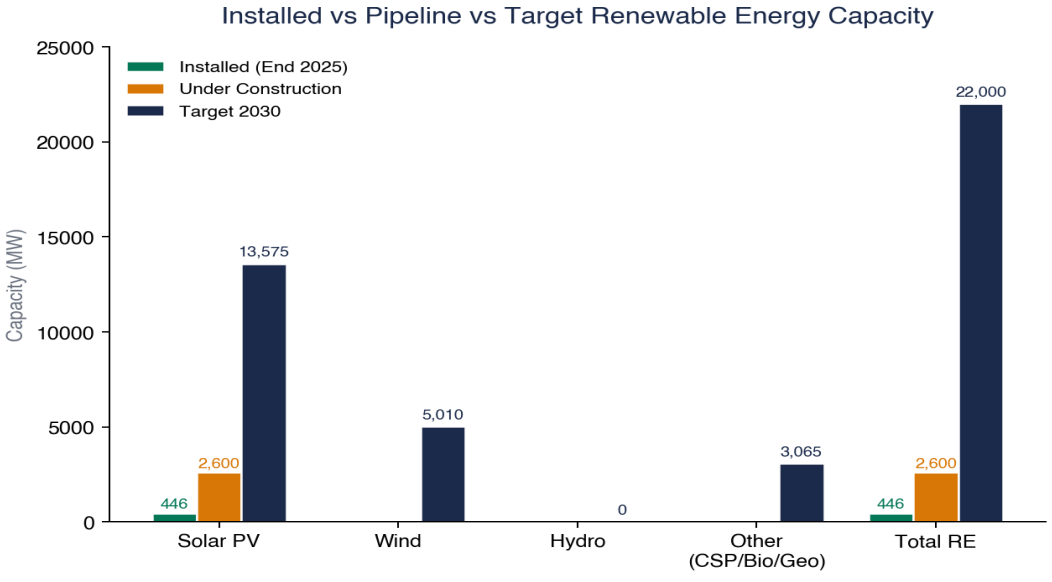
Target Hierarchy

- **22 GW** of RE installed capacity by 2030 (primary national target)
- **15%** RE share in the electricity generation mix by 2035
- **27%** RE share by 2040 (long-term aspirational reference)

AREP Technology Breakdown: 22 GW by 2030

Technology	Target (MW)	Share (%)	Status
Solar PV	13,575	61.7%	Behind
Wind	5,010	22.8%	Far Behind
Solar Thermal (CSP)	2,000	9.1%	Behind
Biomass / Waste	1,015	4.6%	Minimal
Cogeneration	360	1.6%	Behind
Geothermal	50	0.2%	Nascent
TOTAL	22,000	100%	~2% Done

Critical reality: only 446 MW of the 22 GW target has been installed by end-2025 — approximately 2% of the 2030 goal after more than a decade. However, with 2.6 GW under construction and 1.48 GW expected by August 2026, momentum is accelerating. The Mordor Intelligence Algeria RE Market Report (Nov 2025) projects the market reaching 1.53 GW in 2025, growing at a CAGR of 47.90% to reach 10.84 GW by 2030.

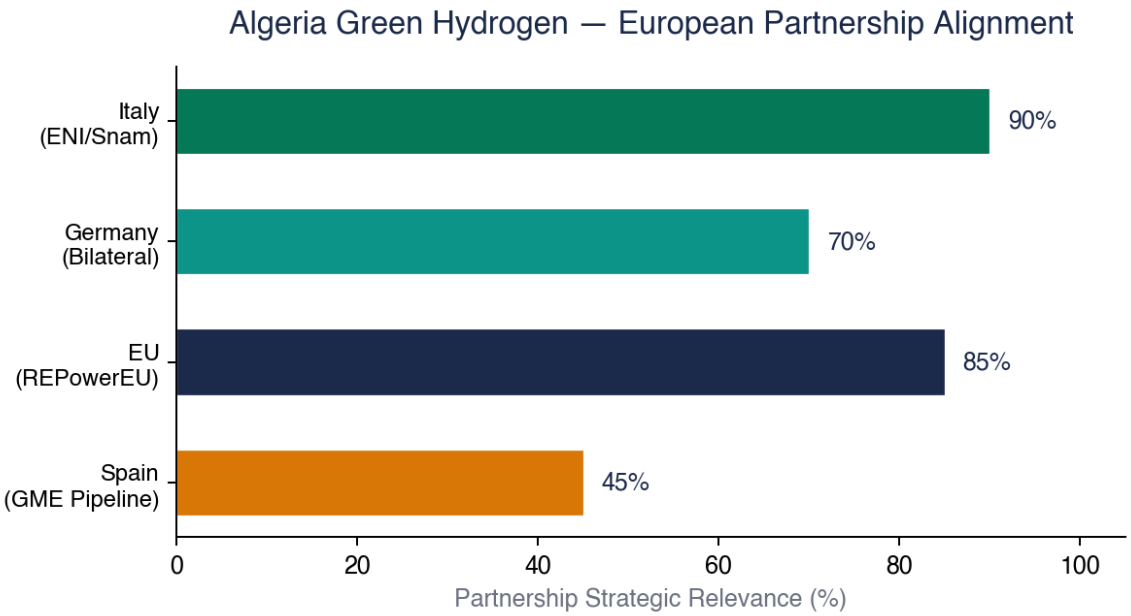


3. NATIONAL HYDROGEN STRATEGY

Algeria officially adopted its National Hydrogen Strategy in **February 2024**, following Council of Ministers approval. The strategy positions Algeria as a future green hydrogen exporter to Europe, leveraging solar and wind resources for electrolysis and existing transnational gas pipeline infrastructure (Transmed and GME). A March 2026 study in the International Journal of Hydrogen Energy confirms the strategy targets approximately **40 TWh of annual hydrogen production by 2040**, with most output intended for export.

Production Targets

Timeframe	Target	Key Milestones
By 2030 (Short-term)	1–2 GW dedicated RE capacity; pilot projects	First demonstration plants; pipeline feasibility studies
By 2035 (Medium-term)	Scale-up toward 40 TWh/year H■ production	Commercial-scale exports to EU; hydrogen valleys operational
By 2040	~40 TWh annual hydrogen production (2026 study)	Full-scale export corridor; EU supply corridor established
By 2050 (Long-term)	2–10 Mtpa green H■ export potential	Pipeline repurposed; integrated EU-Algeria H■ economy



European Partnership Framework

Italy (ENI/Snam/Terna): MoU signed 2023–2024 for feasibility studies on repurposing the Trans-Mediterranean (Transmed) pipeline. Italy's Piano Nazionale Idrogeno identifies Algeria as primary supplier (90% strategic relevance).

EU (REPowerEU): Algeria identified as priority partner under diversification strategy; Joint Declaration on hydrogen cooperation signed (85% relevance).

Germany: Bilateral energy dialogue established 2023–2024; German H2Global framework exploring green H■ and ammonia offtake (70% relevance).

Spain: Potential exports via Maghreb-Europe (GME) pipeline, providing a second Mediterranean corridor

(45% relevance).

Institutional Framework

Hydrogen-specific legislation is under development (2024–2025), to be integrated into existing hydrocarbons and electricity law amendments. APROH (Agence Nationale pour la Promotion de l'Hydrogène) is being established as the lead agency. Key timeline: 2022 EU-Algeria Enhanced Energy Partnership → 2023 Italian MoUs → Feb 2024 Strategy adopted → Mar 2026 40 TWh/yr target confirmed.

4. RENEWABLE ENERGY AUCTIONS

Algeria has progressively shifted from administratively-set feed-in tariffs toward competitive auction mechanisms. The auction program, administered by CREG, has evolved through four rounds.

Round	Year	Tech	Capacity	Bid Price	Key Developers
1 (Pilot)	2018–19	Solar	343 MW (10 projects)	€0.02–0.03/kWh	AET, TOUMI, Râd Energy
2	2020–21	Solar	505 MW (11 projects)	€0.015–0.025/kWh	Domestic + JVs
3 (IGEC 1GW)	2023	Solar	1,000 MW (10 sites)	~1.5–3 DZD/kWh	Domestic + Intl. EPCs
4	2024	Solar +Wind	3,000 MW (2GW solar + 1GW wind)	€0.012–0.018	IRH, CEVital, POWERCHINA, TBEA

The 2024 round included Algeria's first dedicated wind energy auction (1,000 MW). 1.48 GW of solar capacity is expected to be commissioned by August 2026.

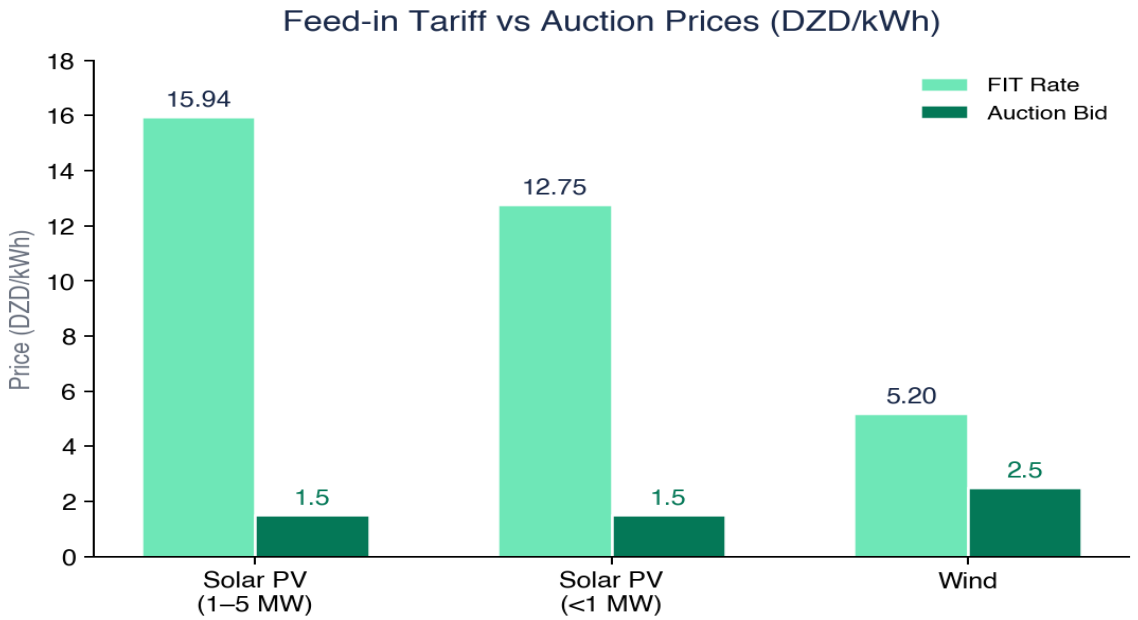
Key Structural Risks for Auction Participants

- **FX Risk:** PPA tariffs denominated in DZD; official ~133 DZD/USD vs. parallel ~260–270 DZD/USD
- **Grid Curtailment:** Southern Algeria's best irradiance zones have the weakest grid infrastructure
- **Local Content Requirements:** Increasing domestic manufacturing/assembly mandates
- **Land Access:** State-owned desert land requires specific permits; process can be protracted

5. FEED-IN TARIFFS FOR WIND AND SOLAR

Algeria's feed-in tariff (FIT) scheme was established under Decree No. 13-218 (August 2013). According to IEA Policy Database and climate-laws.org, the actual FIT rates are:

Technology & Size	Rate (DZD/kWh)	Approx. USD/kWh	Contract Term	Decree Ref.
Solar PV (1–5 MW)	15.94	~$0.120	20 years	Decree 13-218
Solar PV (<1 MW)	12.75	~$0.096	20 years	Min. Order 2014
Wind	5.20	~$0.039	20 years	Decree 13-218



Route Comparison

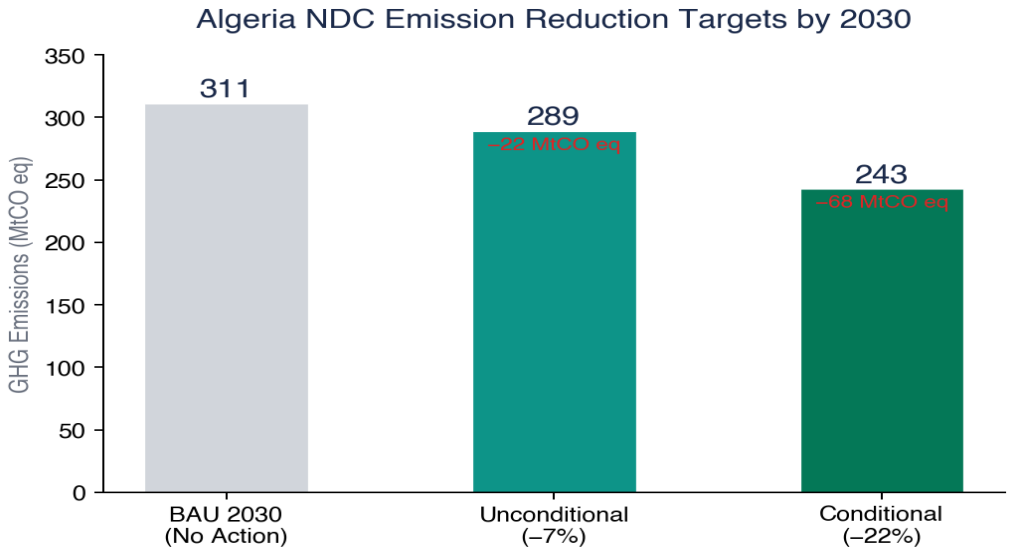
Parameter	Auction Route	FIT Route	Net Metering
Capacity Threshold	> 5 MW	≤ 5 MW	≤ 500 kW
Solar Price	~1.5–3 DZD/kWh	12.75–15.94 DZD/kWh	Offset vs consumption
Contract Term	25 years	20 years	Ongoing
Offtaker	SKG (via PPA)	SKG/CEEG	Self-consumption

Auction-winning solar bids (~1.5 DZD/kWh) are approximately **90% below** the Solar PV FIT rate for 1–5 MW installations (15.94 DZD/kWh), demonstrating the substantial cost advantage of competitive procurement.

6. NATIONALLY DETERMINED CONTRIBUTION (NDC)

Algeria submitted its First NDC to the UNFCCC in 2015, with the enhanced NDC formally recorded in July 2022. The IEA Policy Database confirms that the updated NDC sets:

Target Type	Reduction by 2030	Conditions
Unconditional	~7% (22 MtCO■eq avoided)	Domestic resources only
Conditional	~22% (68 MtCO■eq avoided)	International finance, technology transfer, capacity building



The BAU scenario projects approximately **311 MtCO■eq by 2030**. Renewable energy is expected to deliver approximately **62% of total emission reductions**, making the 22 GW RE target by 2030 the cornerstone of Algeria's climate strategy. Adaptation priority sectors include water resources (desalination powered by RE), agriculture & food security, coastal zones, forestry & desertification, and health (heat-wave early warning systems).

7. FOREIGN INVESTMENT LAWS AND REGULATIONS

Algeria's investment regulatory framework underwent a transformational reform with **Investment Law No. 22-18** (July 24, 2022). The IEA Policy Database confirms that the 2020 rule limiting foreign direct ownership was eliminated.

Investment Law 22-18 — Key Provisions

Provision	Detail
Article 2	Guarantees freedom of investment and equal treatment for foreign investors
Article 5	Foreign investors may hold up to 100% ownership in most sectors, including RE
Articles 8–10	Defines strategic sectors with restrictions: upstream hydrocarbons, defense, railways. RE is NOT restricted
Article 13	Guarantees repatriation of invested capital and profits in foreign currency
Article 14	Protection against nationalization/expropriation except for public utility with fair compensation
Articles 16–17	Transfer of investments and dispute resolution including access to international arbitration

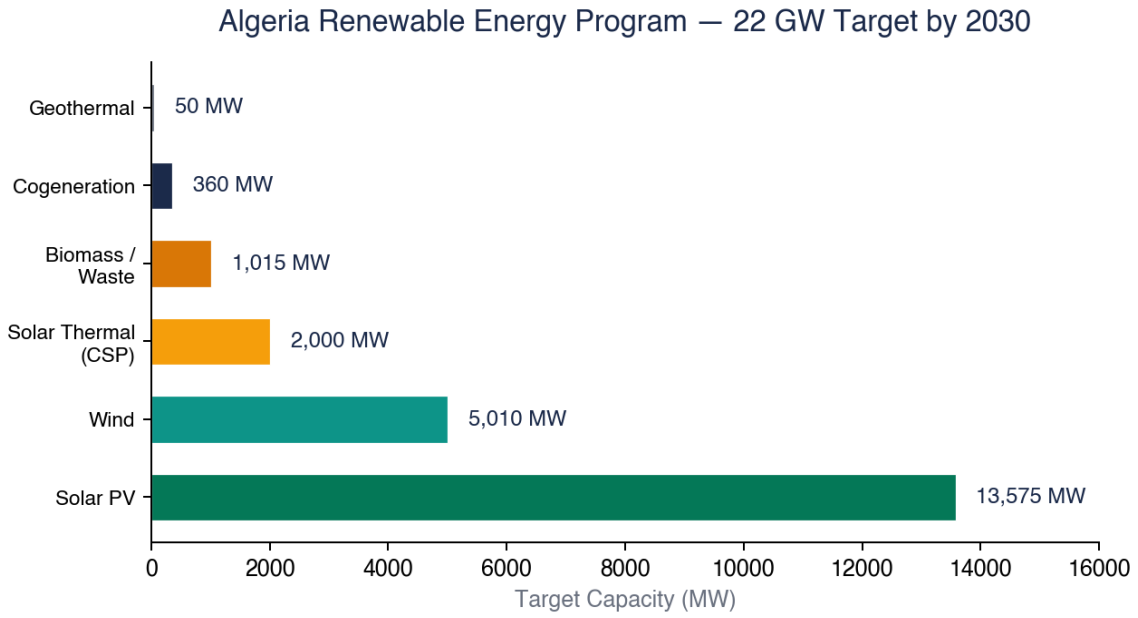
Tax Incentives for Renewable Energy

Incentive	Detail
VAT Exemption	0% rate on RE equipment imports and domestic purchases (solar panels, wind turbines, inverters)
Customs Duty Exemption	0% for RE equipment not manufactured locally
Corporate Income Tax Holiday	5–10 year exemption for RE electricity producers under APRI registration
Property Tax Exemption	Full exemption on RE production installations
Reduced VAT on Electricity	9% rate (vs. standard 19%) on electricity sold by independent RE producers

All investments must be registered with APRI (Agence de Promotion, de Soutien et d'Accompagnement à l'Investissement), which serves as the single window (guichet unique). RE projects qualify for the Sector Général incentive regime.

8. ALGERIA RENEWABLE ENERGY PROGRAM (AREP)

The Algeria Renewable Energy Program (AREP) is the comprehensive national framework for achieving the 22 GW RE target by 2030. Originally launched in 2011 as PNER (12 GW by 2025), revised in 2015 to AREP with an elevated 22 GW target.



Implementation Phases

Phase	Cumulative Target	Focus Areas
Phase 1 (2015–2020)	~4,500 MW	Pilot & early deployment; Ghardaia solar complex, Hassi R'Mel hybrid
Phase 2 (2021–2025)	~10,000 MW	Accelerated deployment; IPP model introduction; 1 GW and 3 GW auctions
Phase 3 (2026–2030)	~22,000 MW	Full-scale deployment; 1.48 GW commissioning (2026); grid modernization

Key Projects

Project	Location	Capacity	Technology	Status
Ghardaia Solar Complex	Ghardaia	343 MW	Solar PV	Operational (1st phase ~150 MW)
Hassi R'Mel Hybrid	Hassi R'Mel	150 MW	CSP + PV	Partially operational
CDER Mini-PV Network	Southern Wilayas	343 MW	Solar PV	Operational (60+ sites)
1.48 GW Commissioning	Multiple	1,480 MW	Solar PV	Expected by Aug 2026
3 GW Tender (2024)	Southern Algeria	3,000 MW	Solar + Wind	Awarded / in development

Progress & Gap Analysis

With 446 MW installed by end-2025 and 1.48 GW expected by August 2026, Algeria is beginning to accelerate RE deployment. However, approximately **21.5 GW remains to be deployed** in the remaining 4.5 years of Phase 3 to reach the 22 GW target.

Key Acceleration Measures

- $60 billion energy investment plan over 5 years (Reuters, Oct 2025)
- 3,000 MW auction round (2024) under IPP model with 100% foreign ownership
- Self-generation decree for industrial consumers (up to 50 MW)
- Sonelgaz grid reinforcement program for southern Algeria
- Saharan Solar Mega-Project concept: potential 2–4 GW hub in Hoggar/Tassili region
- Partnership discussions with Chinese companies (Huawei, TBEA) for manufacturing/investment

Conclusion: Algeria's renewable energy market stands at a genuine inflection point. The convergence of structural demand urgency, legal liberalization (Law 22-18), competitive auction mechanisms, and strategic hydrogen export positioning create a compelling case for accelerated renewable deployment. Execution risk remains high given the 21.5 GW deployment gap, but the trajectory has turned decisively positive.

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