



Navigating the Energy Transition with Bankable Precision

The Clean Green Energy Mission (cGEM)
Strategic Briefing

aessoft 

Aravinthraajan Energy Systems

ReNew the World with Clean & Green Power

The Dual Mandate: Net Zero & Financial Resilience

The global economic pivot toward sustainability demands systems that minimize environmental impact while maximizing long-term financial returns.



Energy Security
& Independence



Economic
Development



Public
Health



Climate Action
Alignment



Bridging Engineering Feasibility and Boardroom Viability

Clean Green Energy Mission (cGEM) is an advanced, AI-powered simulation platform designed by AESPL. It transforms complex clean energy concepts into optimized, feasible, and financially bankable generation facilities.

Raw Engineering Inputs

- Meteorology**: Sun, wind turbine, cloud with rain.
- Hardware Specs**: Solar panel, server rack, power lines, battery packs.
- Load Demands**: City skyline, factory, electric car, charging station.



Boardroom Viability

- NPV & IRR**: Dollar signs, bar charts, and upward arrows.
- CAPEX Reality**: Scales of justice, gears, and stacks of coins.
- Bankable Dossiers**: Document with checkmarks, shield, and handshake.

A Comprehensive Clean Energy Ecosystem

Modular solutions designed to integrate into firm, reliable, and localized power architectures.

Green
Hydrogen



Green
Ammonia



Solar Power
Generation



Wind Power
Generation



Solar-Wind
Hybrid



Round-The-Clock
BESS



The Orchestrator: AI-Powered Energy Engine

The single, intelligent core for end-to-end clean energy project planning.

Location-Specific Hourly Modeling

Precise solar and wind generation modeling based on historical data.



RTC Load Matching & Dispatch

Integrates battery storage dispatch with exact load demand.



Land & CAPEX Assessment

Automated footprint optimization and financial cost estimation.



Carbon Footprinting

Life-cycle emission intensity and ESG monetization.



Unassailable Inputs: NASA MERRA-2 Meteorology

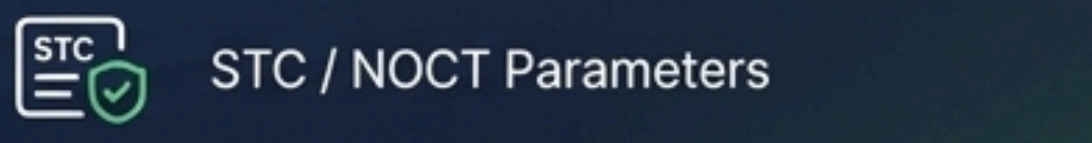
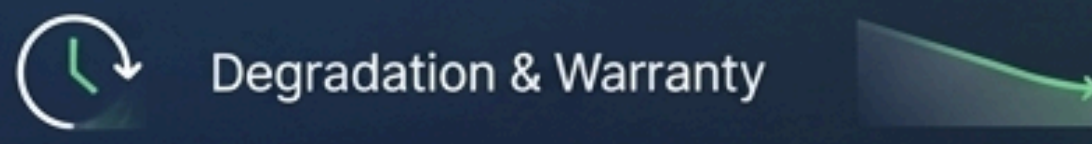
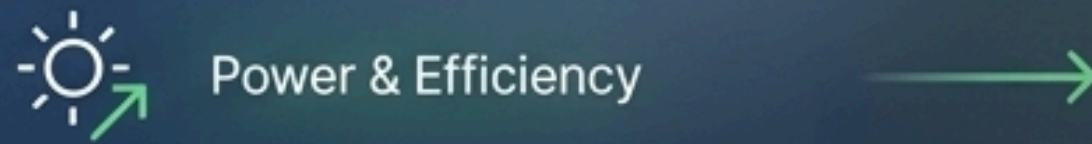
Bankable projects require flawless historical data. cGEM leverages advanced atmospheric reanalysis combining satellite, ground, and numerical models.



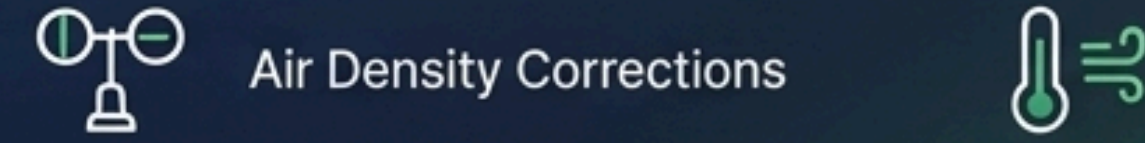
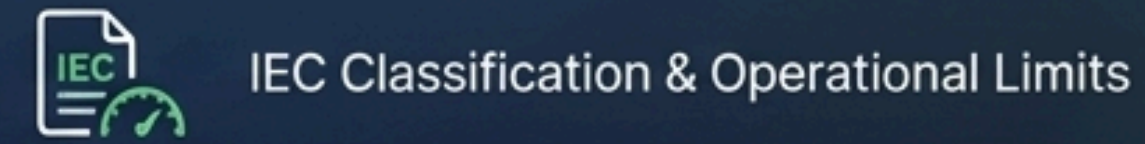
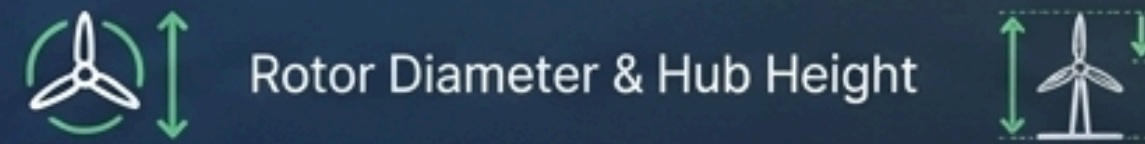
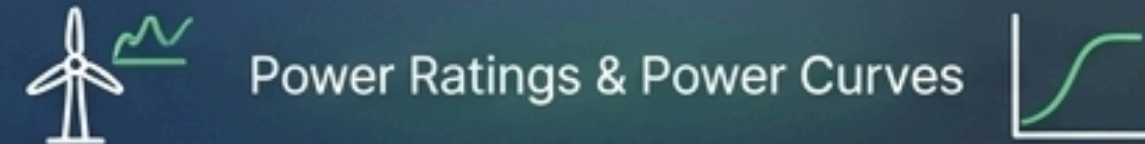
Verified Hardware Specifications: Global OEM Library

Seamless integration of standardized, verified technical specifications ensures precise energy yield assessments and optimized hybrid design.

Solar PV Modules



Wind Turbine Generators



LONGi Solar

TrinaSolar

Jinko Solar

CanadianSolar

Vestas

GE Renewable Energy

SIEMENS Gamesa

GOLDWIND

Envision

The Value Chain: From Raw Data to Actionable Strategy

How cGEM processes global variables into localized investment intelligence.



Board-Level Financial Rigor via **finXXpert**

Investment Inputs



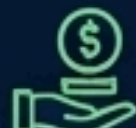
CAPEX Estimates:

- Civil works
- Electrical
- QA/QC
- Insurance



Subsidies & GBIs:

Generation-based incentives mapped to output



Tax Incentives:

Accelerated Depreciation mapping

Bankability Metrics

IRR

Internal Rate of Return

NPV

Net Present Value

LCoG

Levelized Cost of Generation

DSCR

Debt Service Coverage Ratio

Complete P&L, Cash Flow, and Balance Sheet generation

Monetizing ESG: Decarbonization & Carbon Credits

Benchmarking baseline emissions, evaluating life-cycle intensity, and unlocking carbon-credit revenue streams.

Baseline & Life-Cycle Assessment



Calculates expected reductions by benchmarking against conventional technologies.



Incorporates full emission intensity assessments for construction, water, and consumables.



Revenue Generation



Evaluates credit revenue streams across multiple carbon markets.



Seamlessly integrates insights into finXXpert for P&L enhancement.

Ground Truth: Site Topography & CAPEX Reality

Precision engineering of physical constraints—calculating exact footprints based on real-world dimensions and spacing criteria.



Instant Actionable Intelligence

Complex meteorological and engineering data is instantly synthesized into highly secure, multi-currency financial and ESG dossiers.

Live Global Currency API



Automatic Multi-Currency Conversion



Secure Local Configuration



Dynamic Excel Export



Bankable PDF Prospectus

Tailored Engagement Models

Flexible, tiered access to accelerate your energy transition roadmap.

	BEGINNER (Quarterly)	REGULAR (Half Yearly)	ELITE (Annual)	CORPORATE (Annual)
				
User Access	✓ Single User	✓ Single User	✓ Single User	✓ Multi User (Min. 2)
Solution Modules Included	✓ Any 2 Modules	✓ Any 4 Modules	✓ Any 6 Modules	✓ All Modules (As per contract)
Login Sessions / Validity	✓ 300 sessions or 3 months	✓ 600 sessions or 6 months	✓ 1200 sessions or 12 months	✓ Unlimited sessions until expiry
Support Level	✓ Regular Email	✓ Priority Email	✓ Priority Email & Chat	✓ Priority Email, On-Call & Chat

Partnering for Energy Independence

With over three decades of global experience, AESPL invites you to reshape the future of energy. Together, we can power progress while preserving the planet for generations to come.

Schedule a strategic consultation for a **customized** technical and financial proposal.



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