



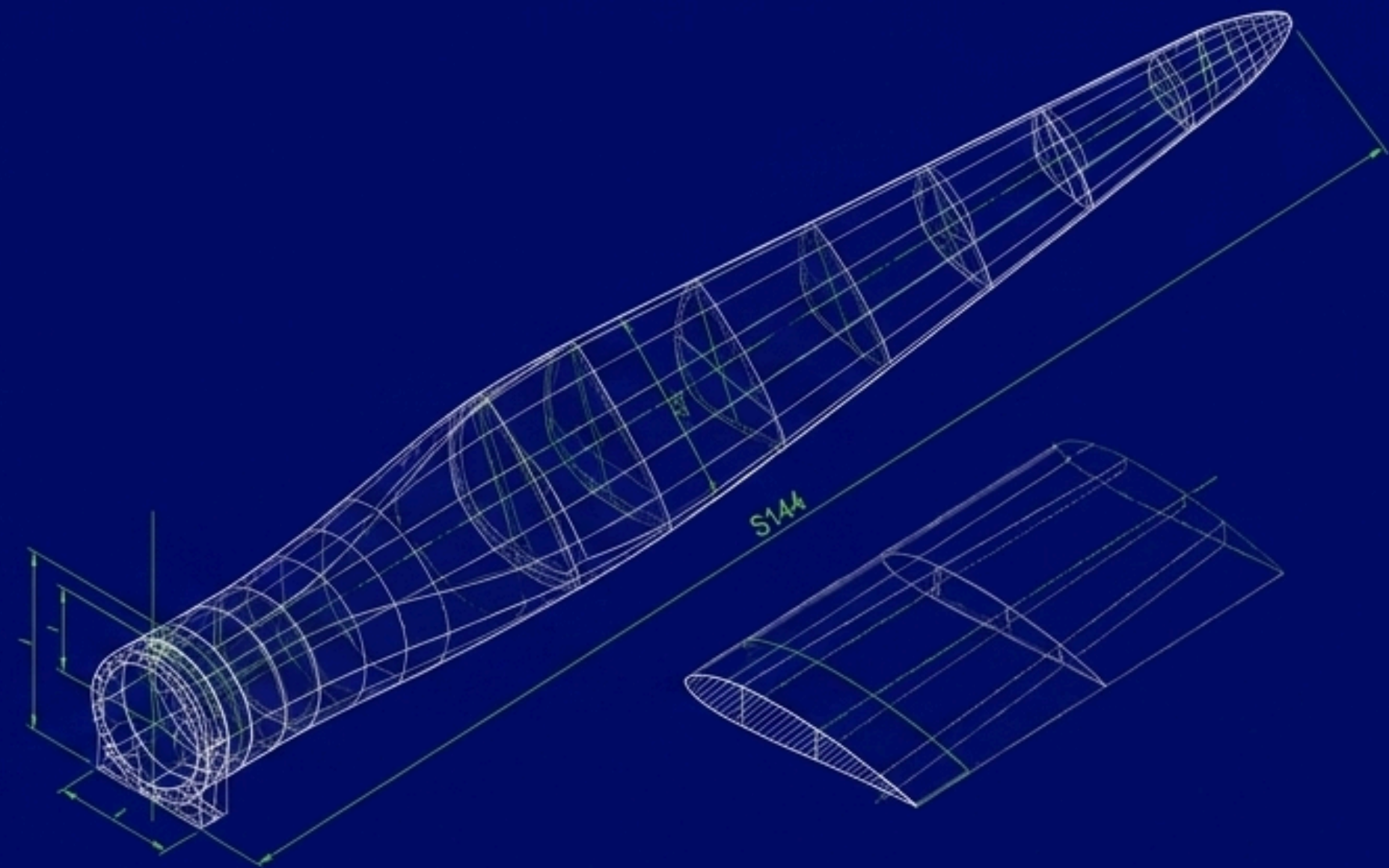
aessoft 
Aravinthraajan Energy Systems

Project Ref:
P-001

Client:
NxxC | Ref: C-001

Plant Capacity:
813 MW

Date:
April 2026



Bellary Green Wind Power Generation

Comprehensive Feasibility &
Investment Briefing

Strategic Investment Opportunity Yielding Strong Returns and Massive ESG Impact

STATUS: HIGH VIABILITY

The Asset



813 MW

Wind Power Plant (271 x Suzlon S144)

Location: Bellary, Karnataka, India

The Capital



94.91B INR

Total Project Cost (\$1.006B USD)

Capital Structure: 70% Debt / 30% Equity

The Returns



14.13% IRR

Project NPV: 43.24B INR

Payback Period: 7.08 Years

The Impact

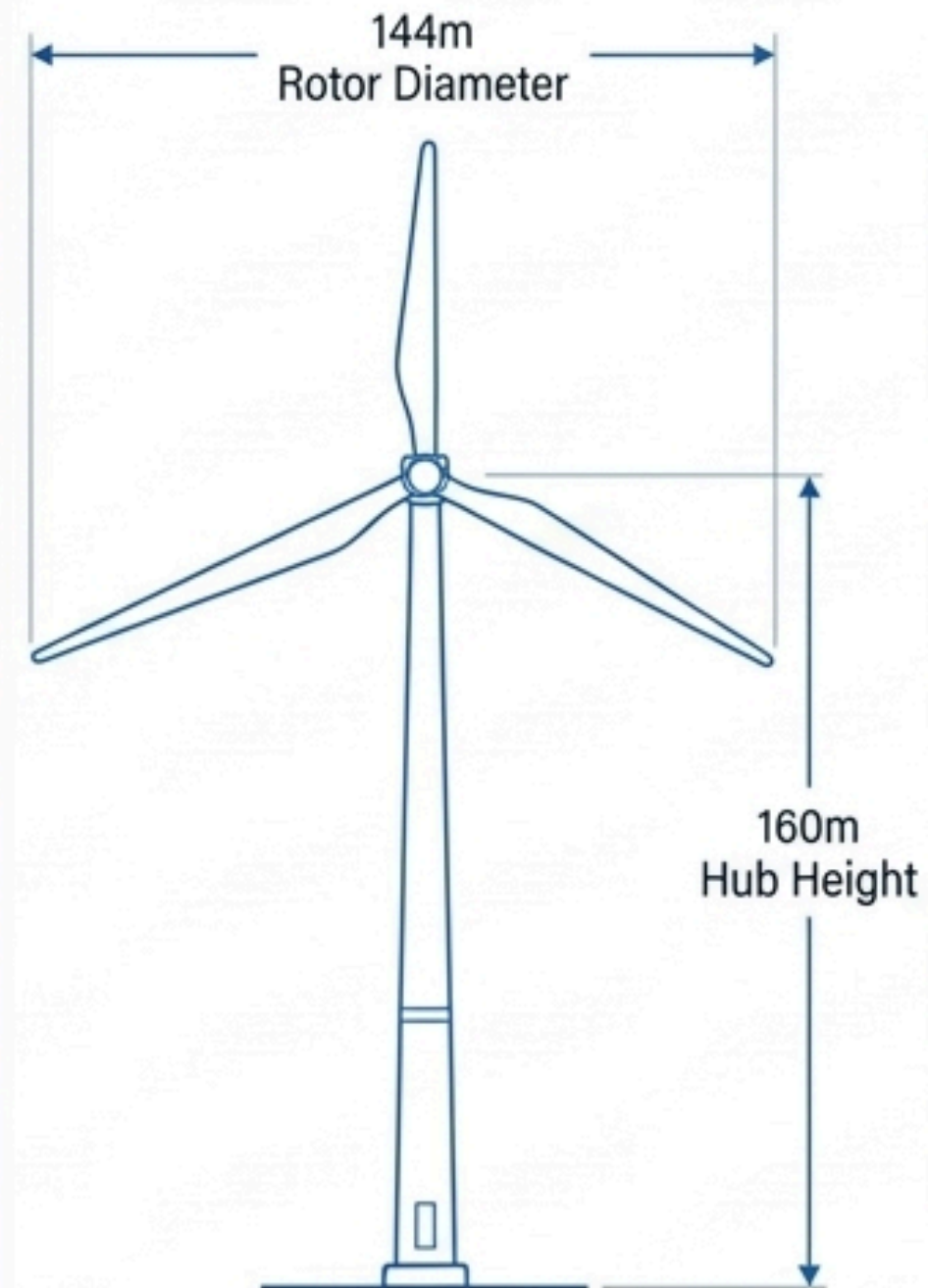


3.97M Tons

CO₂e Emission Reduction / Year

Carbon Credit Revenue: ~\$37.5M USD/year

Strategically Located 813 MW Asset Powered by 271 Premium Suzlon Generators



Fleet Size

271 Units

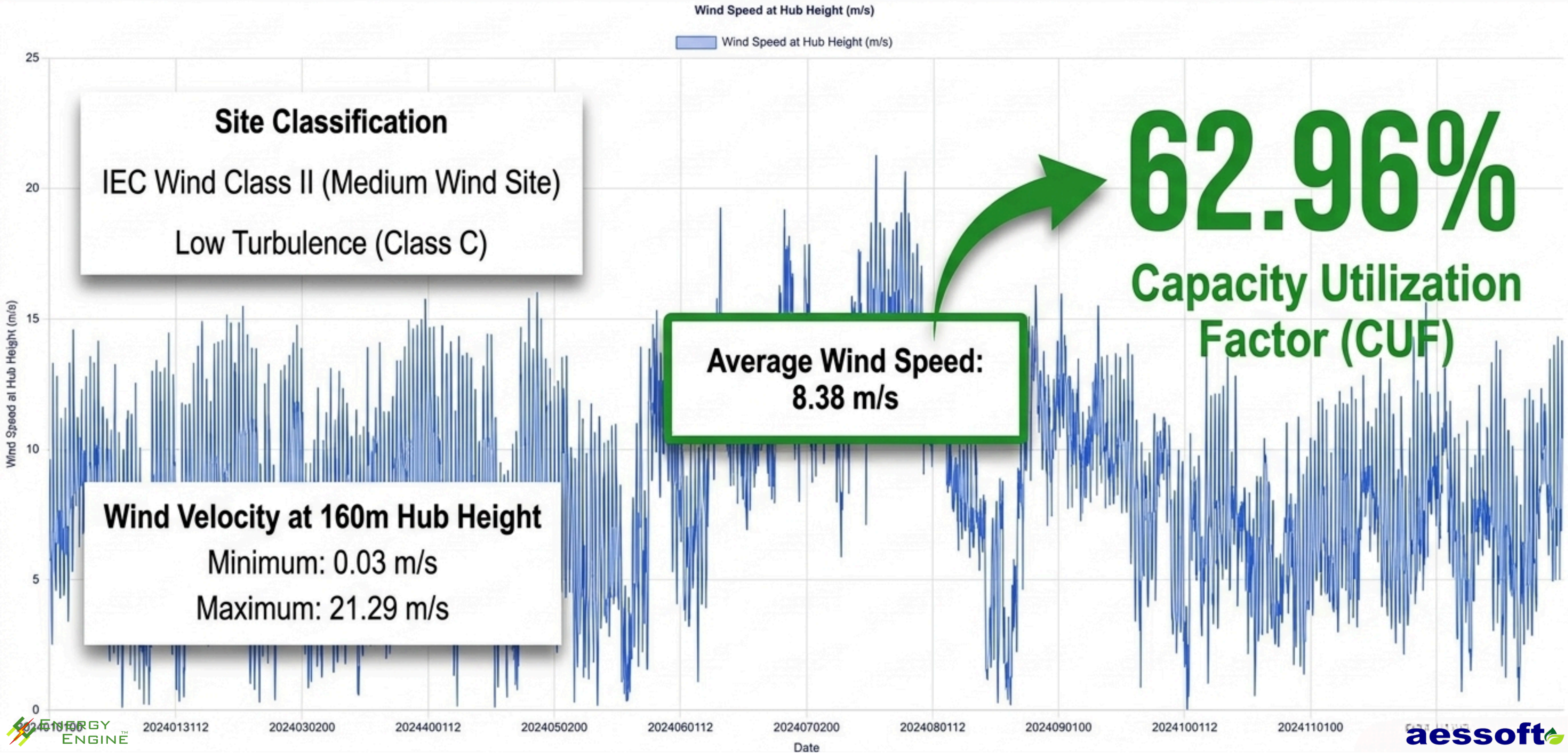
Model

Suzlon S144/3000
(3000 kW Rated Power)

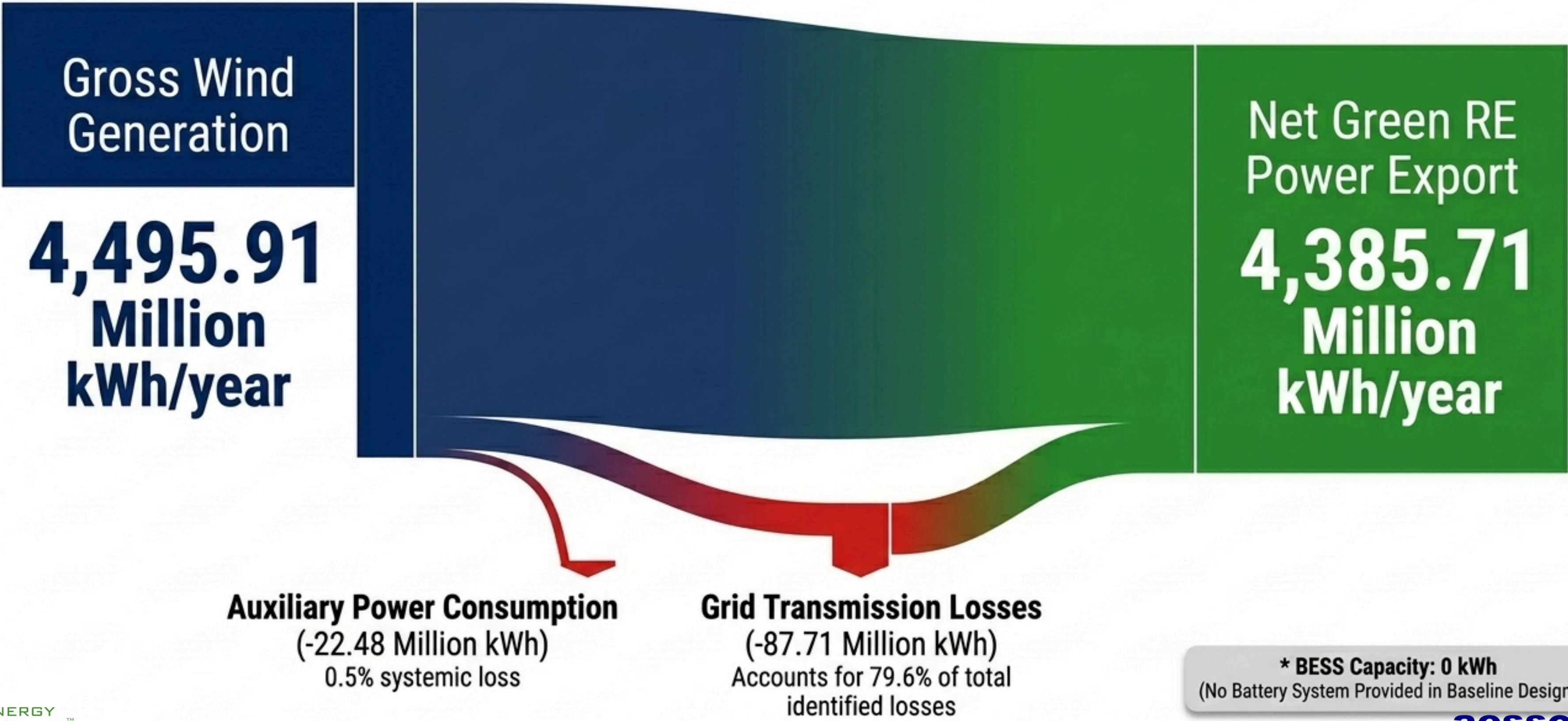
Lifecycle

24-Month Construction
→ 20-Year Operational Life

A Favorable Class II Wind Profile Drives an Exceptionally High 63% Capacity Utilization

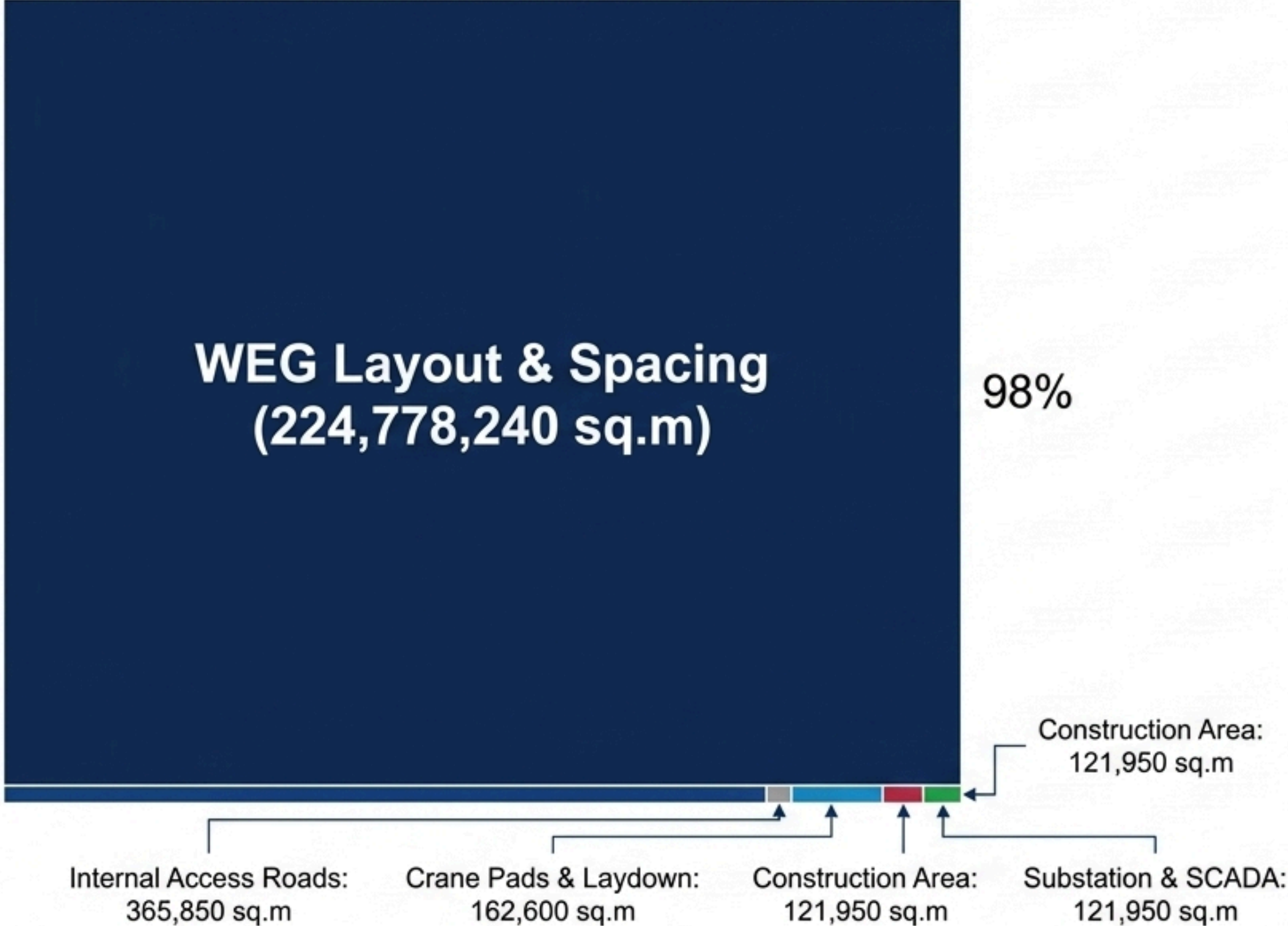


Highly Efficient Transmission Yields Over 4.3 Billion Net Exportable kWh Annually



* BESS Capacity: 0 kWh
(No Battery System Provided in Baseline Design)

Optimized 55,734-Acre Spatial Footprint Allocates Under 8% of Base Capital to Land

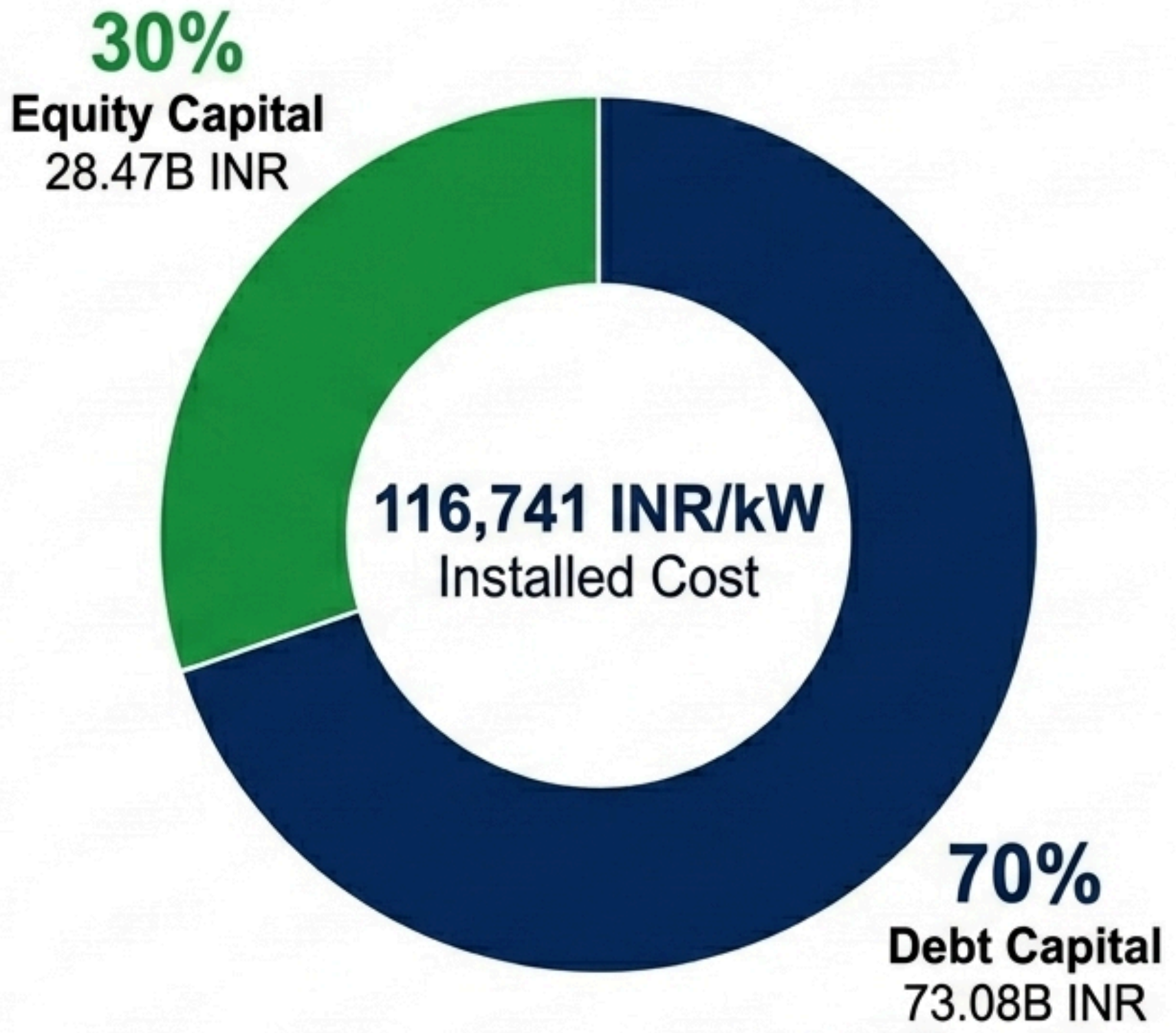
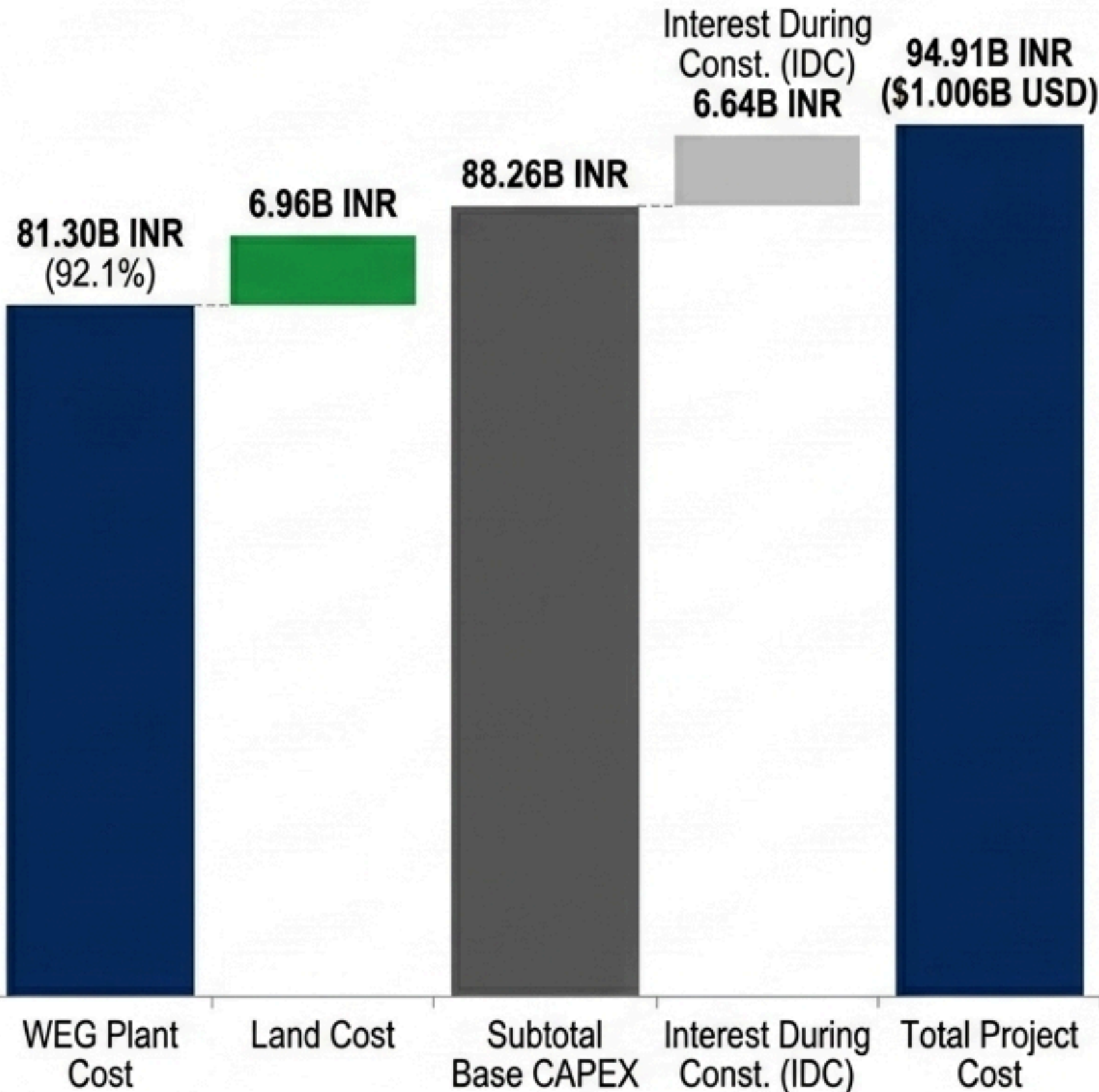


Total Land Required
55,734 Acres
(22,555 Hectares)

Total Land Cost:
6.96 Billion INR

Represents highly optimized
7.9% of Base CAPEX

A 94.9 Billion INR Capital Deployment Supported by a Standard 70/30 Debt-Equity Split



• Includes 66.43B base borrowing + 6.64B IDC. 10-year repayment, 2-year moratorium

Lean Operating Economics Driven by Predictable Maintenance and Working Capital Models



O&M Expense Base
1,200 INR/kW



Working Capital Buffer
1% of CAPEX for Spares
1 Month O&M | 1 Month Receivables



Resource Cost
50 INR/CUM
Treated Water Rate

Modeled 20-Year O&M Escalation Trajectory



Environmental Impact Generates ~\$37.5M USD Annually in High-Value Carbon Credits

3,978,146

Tons of CO₂e avoided annually

3.75 Billion INR (~\$37.5M USD)

Additional annual revenue generated directly to the bottom line

Calculated at current \$10/ton ICM (India) Standard pricing



Offsets **926,908** petrol cars for a year.

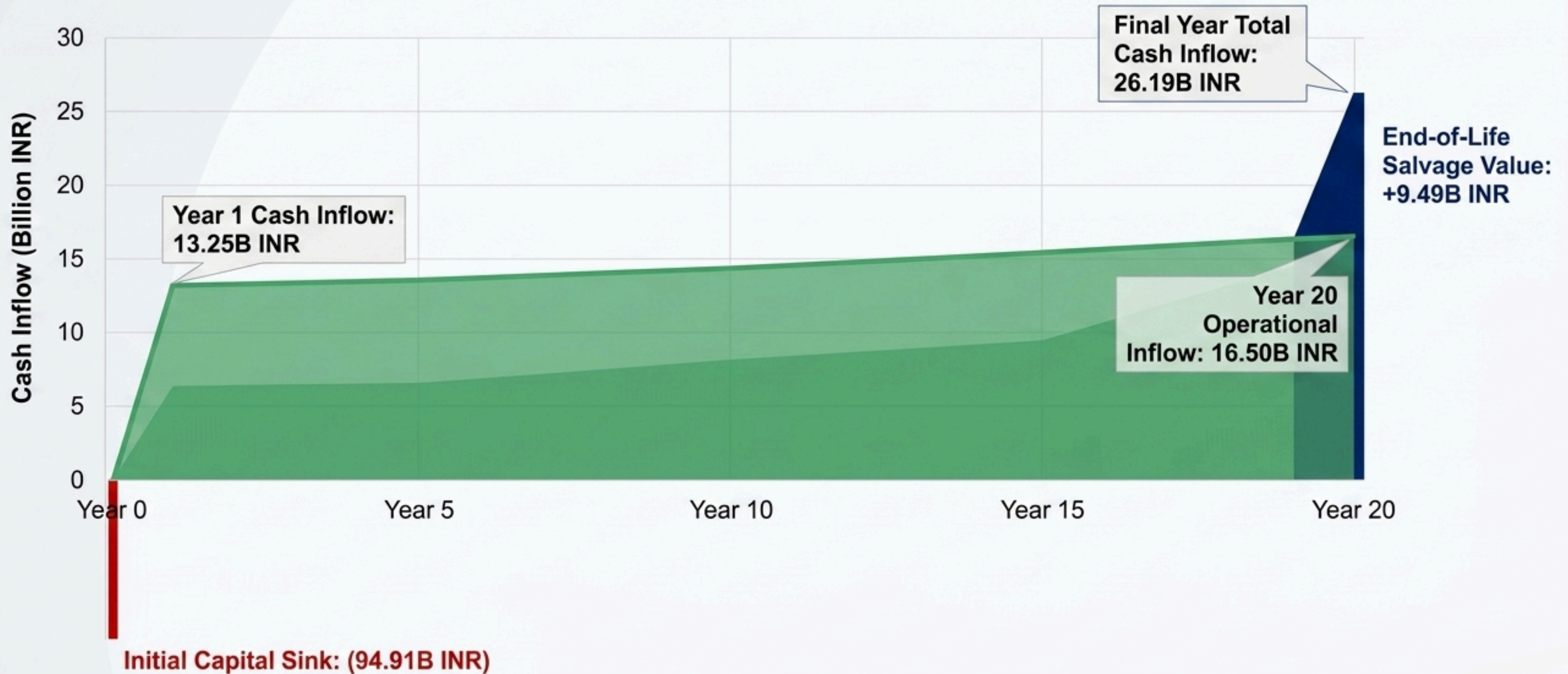


Replaces **2,004,986,066** kgs of burned coal.



Equals carbon sequestered by **65.6 Million** trees.

Twenty Years of Robust, Escalating Cash Inflows Culminating in a 9.49 Billion INR Salvage Event



Investment Thesis Validated by 14.1% IRR and Break-Even Achieved in Just Seven Years

Terminal Readouts

Project Internal Rate of Return (IRR)

14.13%

Project Net Present Value (NPV)

43.23 Billion INR

System Efficiency Diagnostics

Levelized Cost of Generation (LCOG):
Highly Competitive Modeled Rate

Debt Service Coverage Ratio (DSCR):
See Full Model Output

Payback Timeline

7.08 Years
Capital Payback Achieved

13 subsequent years of completely unencumbered asset operation.

Executive Diagnostic Matrix Confirms High Feasibility Across Technical, Financial, and ESG Pillars

Technical Pillar

- ✓ IEC Class II wind site with low turbulence.
- ✓ Top-tier Suzlon S144 hardware deployed.
- ✓ Exceptional 63% Capacity Utilization Factor.



VIABILITY: HIGH

Financial Pillar

- ✓ 14.13% unlevered IRR clears standard hurdles.
- ✓ 7.08-year capital payback on a 20-year asset.
- ✓ Stable, escalating 20-year cash flows.



VIABILITY: HIGH

ESG & Strategic Pillar

- ✓ Nearly 4M tons of annual CO2 reduction.
- ✓ Generates \$37.5M USD annually in highly liquid carbon credits.



VIABILITY: HIGH

Recommendation: The Bellary 813 MW project represents a highly optimized, derisked asset ready for immediate capital deployment.

Experience Real Engineering

The Clean Green Energy Mission is more than a program – it is an ENGINEERING movement for Energy Transition!



[[Subscribe to Experience](#)]

[[Request a Live Demo](#)]

[[Take a Product Tour](#)]

Contact AESPL:

✉ cgem@aessoft.in | sales@aessoft.in

🌐 www.aessoft.in | [in linkedin.com/in/aespl](https://www.linkedin.com/in/aespl)