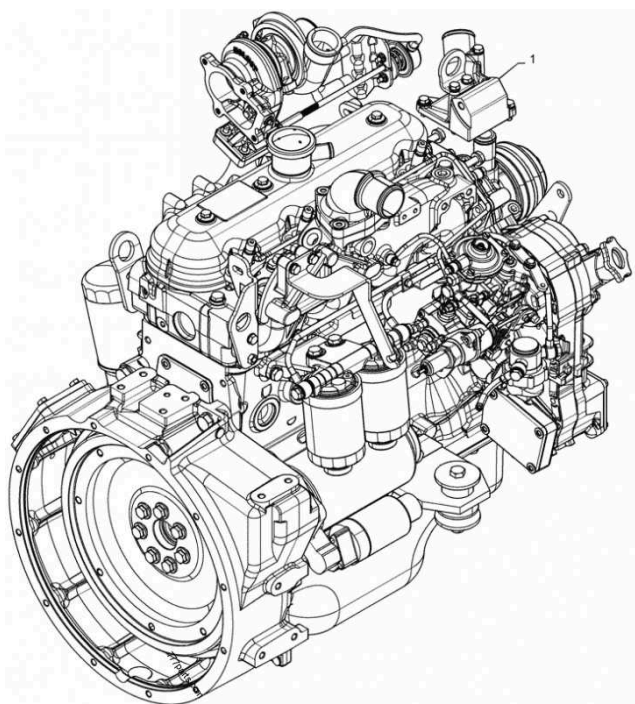
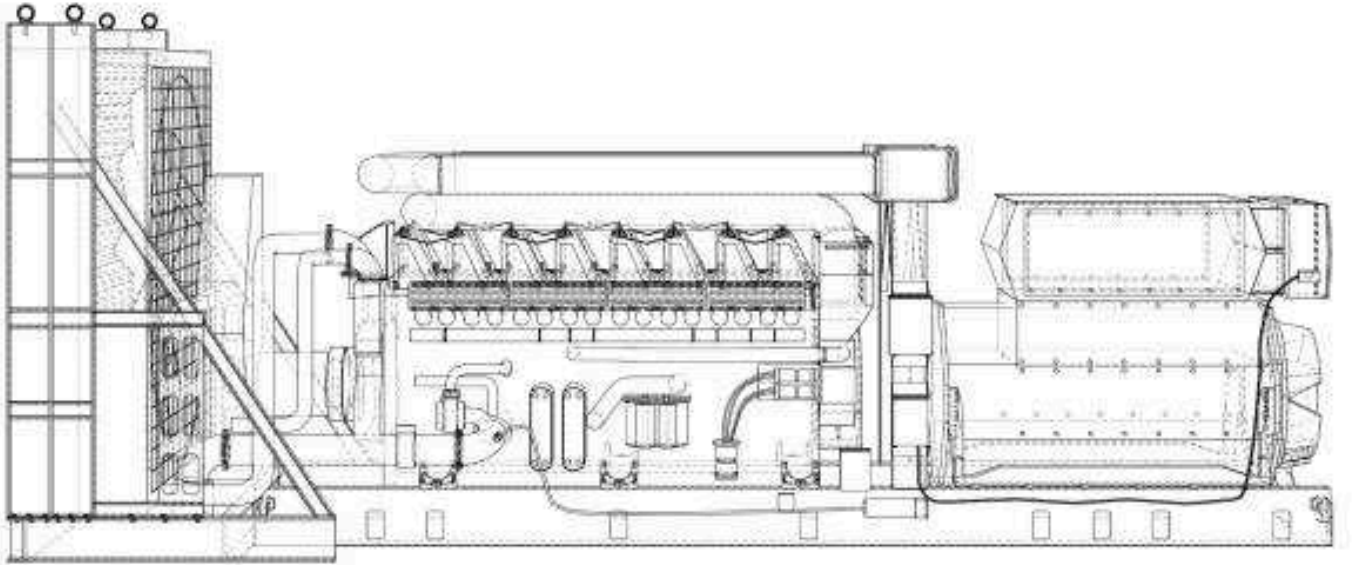


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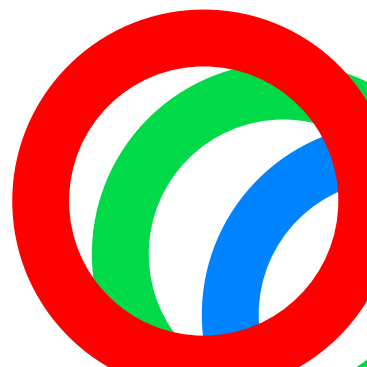


Diesel Generator Upgrade

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Executive Summary

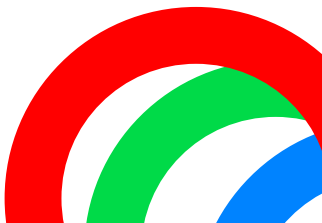
WETCLAY ENERGY TECHNOLOGIES (WET) delivers 80% gas (CNG/LPG) + 20% diesel retrofits for generator upgrades , slashing fuel costs by up to 70% and emissions by 50–60%. Trusted by 19+ organizations, including Petrocam and Buena Vista Estate, our systems are ISO-certified and engineered for Nigerian conditions.

Market Analysis: Diesel vs. CNG/LPG Economics

Fuel	Price/Liter (₦)	Energy Density (MJ/L)
Diesel	1,200 – 1,400	38.6
CNG	300 – 400	43.1
LPG	350 – 450	46.3

Annual Savings Potential

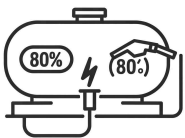
- ₦356M for 500kVA generators
- ₦78M for 250kVA generators (See Case Study).
- ₦45M for 100kVA systems.



Technical Specifications & System Components

- BFFI System (HSR-TDC B30): Sequential gas-diesel injection
- High-Precision Injection Rail: $\pm 1\%$ fuel ratio accuracy.
- Aerospace-Grade CNG Piping: 10,000 PSI pressure tolerance.
- Smart ECU with IoT Monitoring: Real-time performance analytics.

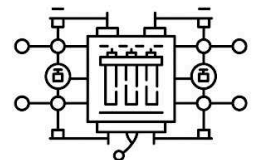
System Workflow



Gas Injection: 80% CNG/
LPG replaces diesel.



Diesel Pilot Ignition:
Ensures stable
combustion.



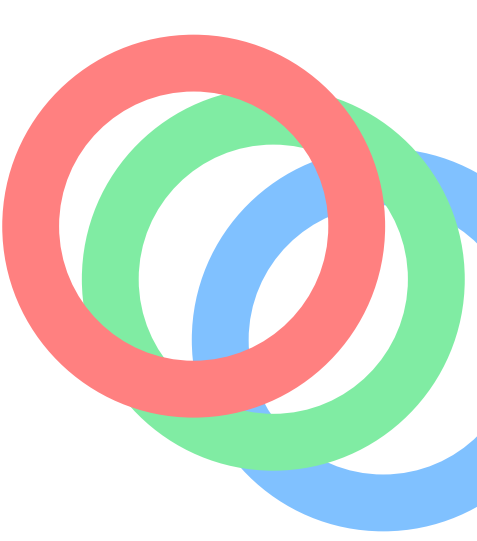
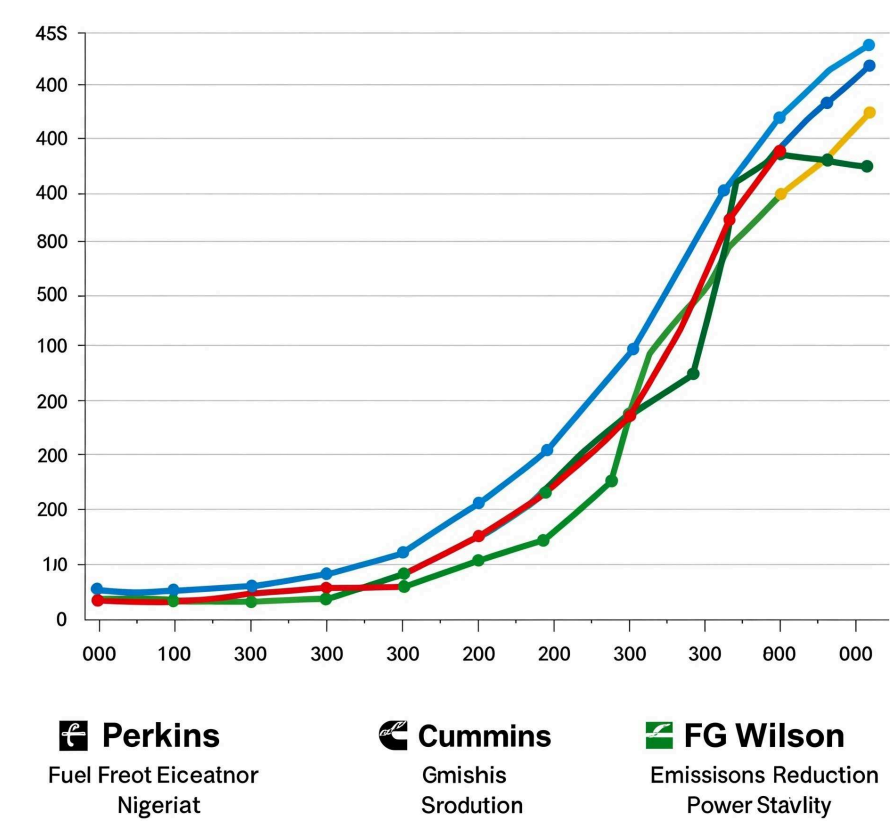
Dynamic Load
Adjustment: Maintains
voltage stability.



Performance Metrics for Nigerian Generator Brands

Nigerian Market Leaders

Brand	Model (kVA)	Fuel Saving	Emission Reduction	Power Consistency
Perkins	200	68%	52% CO ₂	±1.5% Voltage
Cummins	150	70%	58% NO _x	±1.2% Voltage
FG Wilson	100	65%	50% Particulates	±2.0% Voltage



Engineering Benefits

- Extended Engine Life: Cleaner combustion reduces carbon buildup.
- Lower Maintenance: 40% fewer oil changes.

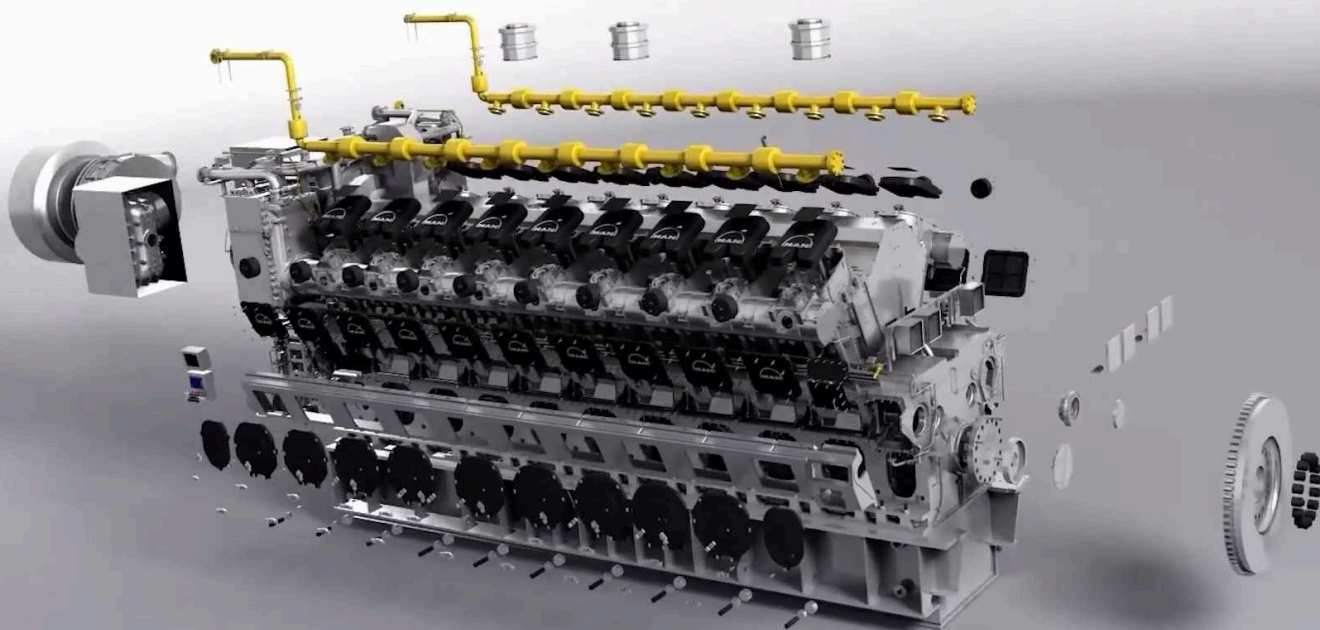
Emission Reduction (Third-Party Study)

- CO₂ & NO_x Reduction

Efficiency Gains

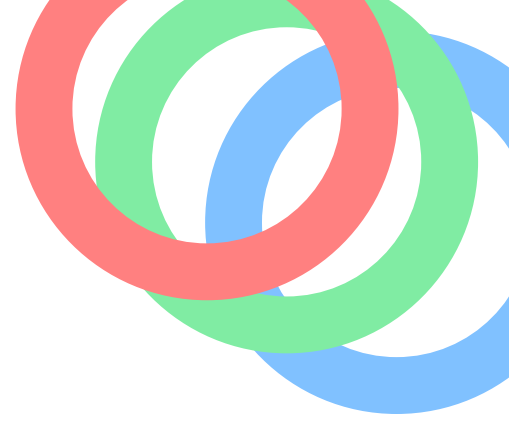
Metric	Diesel-Only	Dual-Fuel
Fuel Use (L/hr)	35	12
Thermal Efficiency	32%	41%
Maintenance Cost/Year	₦2.5M	₦1.1M

Diesel Generator Upgrade



Case Study:

Justice Court (80kVA Generator)



Pre-Conversion (10 Months)

- Diesel Cost: ₦96M | Runtime: 2,404 hours.

- Emission Output: 12.8 tons CO₂.

Pre-Conversion (10 Months)

- Total Cost: ₦33.7M (₦33.6M Diesel + ₦81k CNG).

- ROI Achieved: 4 months.

- Emission Reduction: 7.1 tons CO₂ (-45%).

7. ROI & Cost-Benefit Analysis

Conversion Investment

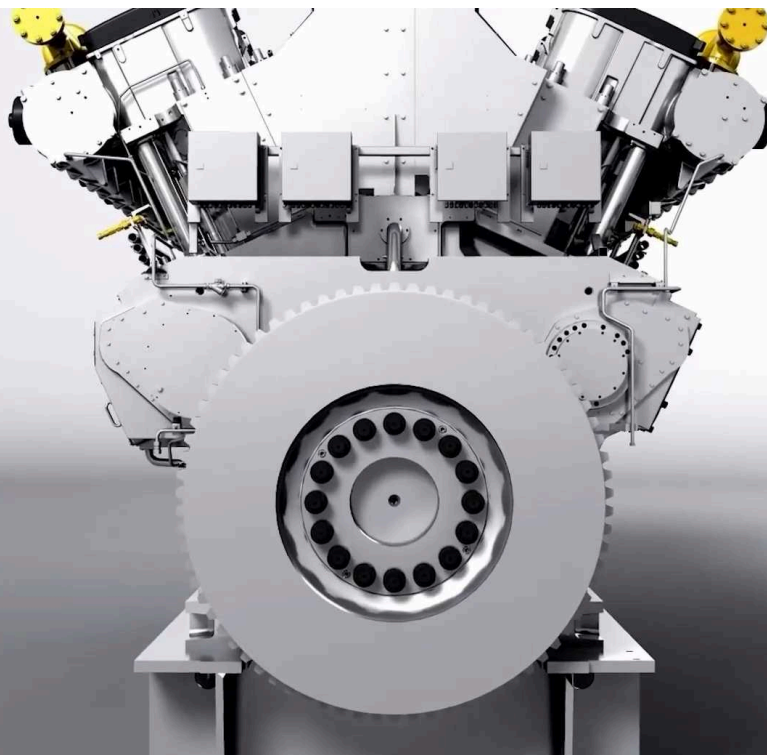
Generator Size	Cost (₦)	Payback Period
<100kVA	7M	12
>100kVA	9M	3-4 Months

5-Year Savings Forecast

- ₦360M for 250kVA generators.

- ₦210M for 100kVA systems.

Diesel
Generator
Upgrade





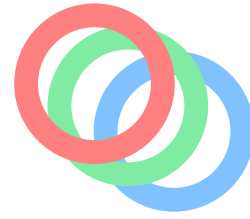
Installation Process

- Site Audit (3 Days): Load analysis & feasibility.
- Hardware Installation (10 Days): Gas rails, ECU, piping.
- Calibration & Testing (5 Days): Load stress tests.
- Total Time: 18 working days.

Certifications & Global Partnerships

- ISO 9001: Manufacturing excellence.
- UNESCO IAWPA: Sustainability alignment.
- NIPR/ARCON: Compliance assurance.
- Partners: Petrocam, Buena Vista Estate, Dangote Industries.

Client Success Stories



“WET’s retrofit cut our annual fuel spend from ₦120M to ₦42M. Flawless integration!”

Petrocam (Lagos HQ, 250kVA):

Buena Vista Estate (1,000kVA)

Eng. Tunde Okafor, Operations Director

“Zero downtime during installation. Now saving ₦9M monthly!”

— Mrs. Adebola Yusuf, Facility Manager

Diesel Generator Upgrade

THE WET – WETCLAY ENERGY TECHNOLOGIES

No. 50 Ebitu Ukiwe Street Jabi, Abuja.

29/04/2025

Subject: Unlock Up to 50% - 70% Savings on Power Costs by Upgrading your Diesel Generator

Dear Sir/Madam,

We understand that managing operational costs while maintaining efficiency is a challenge every forward-thinking organization faces. At Wetclay Energy Technologies, we are driven by a passion to help organizations like yours make smarter, more sustainable choices that significantly reduce expenses while driving impactful results.

We wish to offer you a free power audit and conversion of your generator to a dual fuel system. The solution costs; ₦8 million for 30kVA to 80kVA Generators, ₦10 million 100kVA - 350kVA, ₦15 million for generators 400kVA -750kVA, and ₦20 million for generators above 800kVA.

After careful processes of thinking we look forward to you implementing our cost saving solution. Have a successful day.



Best Regards

Amb. Nelson Bright

Public Relations - Wetclay Energy Technologies

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