



CUSTOMER KEY NOTE

Powering Decarbonisation: Fueling
Sustainable Backup Power for Data
Centers

NESTE VETURI R&D
PROGRAM





Rolls-Royce Group

A world-class technology company, built on three strong and complimentary business units.



Civil aviation



35
types of commercial aircraft powered by us



11.500
engines in service around the world



18.300
total employees



£ 7.4 billion
(€ 8.5 billion)
underlying revenue

Defence



150
customers in over 100 countries



16.000
engines in service around the world



12.000
total employees



£ 4.1 billion
(€ 4.7 billion)
underlying revenue

Power Systems



> 40.000
customers in 13 different industries



20.000
engines sold per year



> 10.500
total employees



£ 4.0 billion
(€ 4.6 billion)
underlying revenue



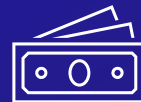
Power Systems at a glance



A Rolls-Royce
solution

Turnover 2023

4.6 billion €*
(4.0 billion pounds)



Employees
> 10.500



24 %
Industrial



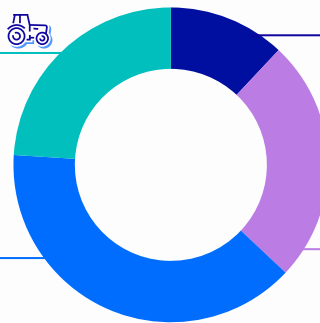
39 %
Power
Generation



12 %
Marine



25 %
Governmental



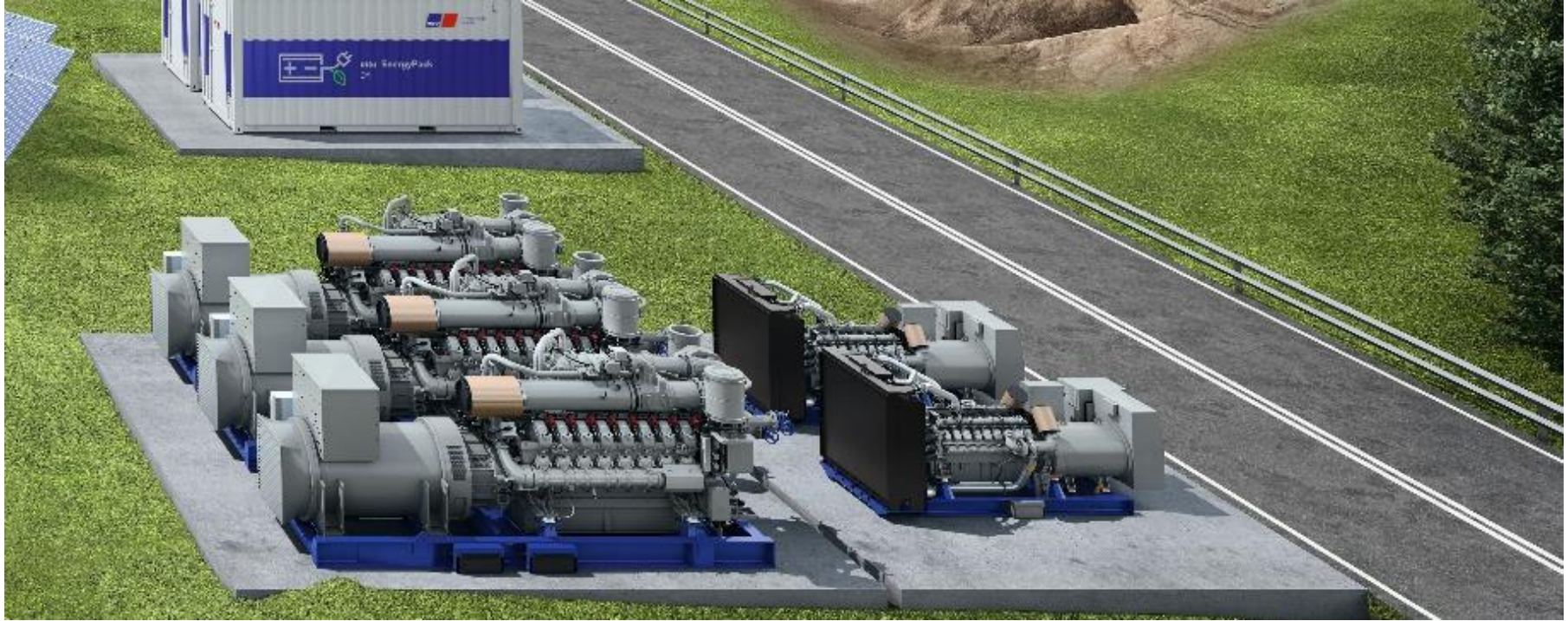
*the figures are in pounds

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POWERING, PROTECTING AND CONNECTING THE MODERN WORLD



FOCUS OF TODAY IS ON MISSION CRITICAL BACKUP POWER



DATA CENTERS ARE THE BACKBONE OF DIGITAL INFRASTRUCTURE



1 of 3
internet clicks
is backed by
Rolls-Royce
genset



1. MANAGE, PROCESS, AND STORE LARGE VOLUMES OF DATA

2. ENSURE CONSTANT UPTIME, OFFERING ROBUST POWER SUPPLY, COOLING AND SECURITY

3. ENSURE DATA RELIABILITY AND MINIMIZE DOWNTIME

Source picture:

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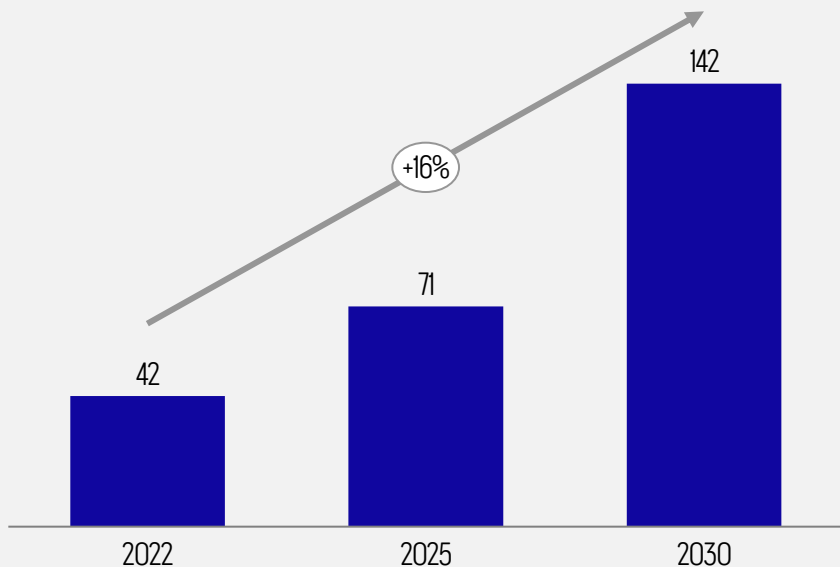
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RISING DEMAND FOR ACCELERATED COMPUTING POWER DRIVING DATA CENTER PERFORMANCE, AI INNOVATION AND BACKUP GENERATORS



DATA CENTERS GLOBAL [GPU¹ sales in \$bn]



KEY TAKE-AWAYS

- AI-based data centre to grow significantly during the next 5-7 years
- GPU sales growth of >15% CAGR until 2030²
- Demand to remain elevated beyond 2030
- Implications:
 - Fast-growing market with critical power needs
 - High expectations for reliability and sustainability
 - Diesel gensets remain essential for backup power

1. GPU (Graphics Processing Unit) is a specialized processor designed for parallel data processing, primarily used in AI, Machine Learning, and Big Data applications to significantly boost computing performance in data centers.

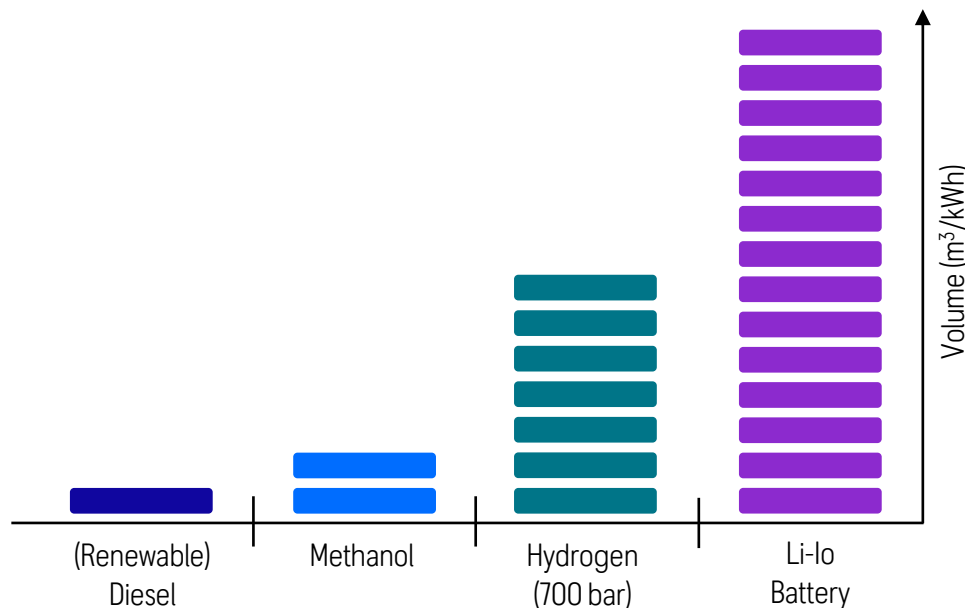
2. Forecast based on investment banking data and internal analysis. 2. UHNWI (Ultra-High Net Worth Individuals): investable assets > \$30m

Sources: Intel, Credit Suisse Global Wealth Report 2022, Deloitte Boating Market Monitoring 2023, Government announcements, NATO, IISS, McKinsey, BNEF, IEA

RENEWABLE DIESEL AS 'POWER DENSITY CHAMPION' LEADS TO FURTHER DOMINANCE FOR 'OFF-HIGHWAY' APPLICATIONS



Fuel options to defossilize Rolls-Royce Solutions applications and its space requirements



(Renewable) Diesel

Highest energy density & Drop-In fuel (no changes in hardware and software needed)

Methanol

Medium energy density & costs – technology adaptations necessary incl. R&D

Hydrogen (700 bar)

Lower energy density & zero carbon solution in case of green hydrogen – technology adaptations necessary incl. R&D and infrastructure

Lithium-Ion Batterie

Lowest energy density storage solution with no local emissions

ROLLS-ROYCE & NESTE PARTNERING FOR DECARBONIZATION



Scope partnership: Driving Sustainability with Current Tech

Target

Accelerating HVO adoption

Neste

Feedstock expertise & HVO production

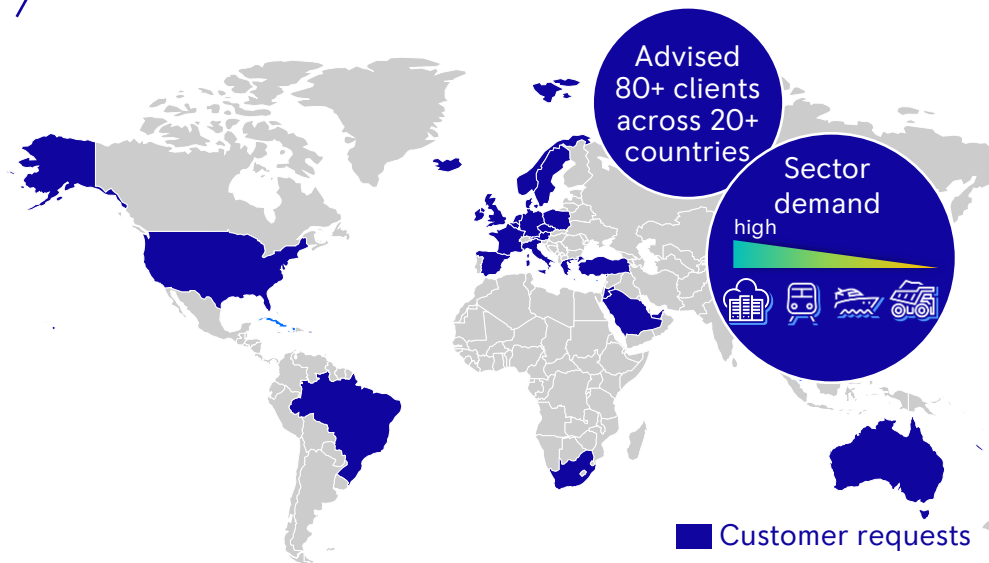
Rolls-Royce Power Systems

System validation & market integration

Focus

Data centers & energy supply w/ scalability

Rollout partnership: Leveraging Market Pull for Regulations



KEY BENEFITS OF HVO FOR DATA CENTER BACKUP POWER



80%
portfolio
released
since
2022



DROP-IN READY

No modification needed for existing released diesel generators



LOWER CARBON FOOTPRINT

< 90% CO₂ reduction, supporting sustainability goals & meeting regulations



CLEAN & RELIABLE

Fewer emissions and longer fuel shelf life vs fossil Diesel

OVERCOMING SYSTEMIC BARRIERS TO SCALE HVO IN DATACENTERS



Barriers

01

Operational Uncertainty

Logistics and Supply Chain Reliability need further validation at Scale

02

Certification Complexity

Complex, fragmented certification schemes slow adoption - GHG traceability, compliance & lifecycle reporting add effort

03

Economic Viability

Cost premiums and regional market disparities hinder large-scale adoption

04

Feedstock Constraints

Limited availability and regional concentration of sustainable raw materials

Mitigation & Stakeholders

Reliable, large-scale deployment depends on regional availability, fuel quality consistency & stable long-term supply chains — with transport firms, upstream suppliers, station operators, and policymakers playing pivotal roles

Certification complexity requires a unified approach to streamline compliance & enhance transparency. Standardization bodies, regulators & certifiers, play a central role.

Economic viability depends on strategic policy tools — subsidies, carbon credits — & cost-efficient technical innovation. Key enablers are policymakers, fuel suppliers, engine manufactures & data center operators

Sustainable scale-up requires a broader feedstock base — with industry leaders, research institutions, investors & regulators driving the transition.

OUR JOINT REFERENCES LEAVE A SUSTAINABLE MARK



DB Deutsche Bahn,
Germany



EcoDatacenter
Sweden



Rio Tinto
California



Walk the Talk: Rolls-Royce Solutions runs genset tests using HVO fuel



Q&A



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Thank you for your attention!