



Molecular Energies PLC

MOLECULAR ENERGIES

INVESTOR PRESENTATION
JANUARY 2024



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EXECUTIVE SUMMARY



COMPANY OVERVIEW

- An international energy company on the AIM market of the London Stock Exchange with both hydrocarbon and green alternative energy businesses
- Embarking on a new phase of growth with significant amount of catalysts within H1 2024
- Raise of not less than £500,000 to pursue new opportunities. Peter Levine converting debt in line with raise. No General Meeting required.



PRESIDENT OIL AND GAS

- High impact exploration well in Paraguay spudded 10 January 2024 targeting a complex of 260mmbls Pmean un-risked resources. Drill time 45 days
- Cash flows from the sale have commenced in Q1 2024 arising from the sale of the Argentine business in relation to repayment of US\$13 million intercompany debt with US\$500,000 paid since the start of the new Argentine Presidency in December 2023.



GREEN HOUSE CAPITAL

Molecular currently owns 75% of Green House Capital Limited, the owner and operator of alternative energy businesses to be spun out with IPO planned towards the end of Q1 2024 with all advisers in place, documentation at an advanced stage with significant progress and prospects in its group companies.



ATOME ENERGY

Molecular owns 20.5% of AIM listed ATOME Energy, the first LSE industrial scale producer of green fertilizer from green hydrogen, created by Molecular and spun out in 2021



Molecular
Aviation

OTHER OPPORTUNITIES

Molecular pursuing other opportunities in the fields of synthetic and other green fuel production



BOARD OF DIRECTORS

Experienced Management and Significant Shareholders



PETER LEVINE
Chairman
Ex Imperial Energy



ROB SHEPHERD
Group Finance Director
Ex Shell, ABN AMRO



JORGE BONGIOVANNI
Non-Executive Director
Ex IFC



ALEX MOODY-STUART
Non-Executive Director
Ex VP Schlumberger

Senior Management



CHRISTOPHER RAGGETT
CEO Green House Capital
Ex-Head of Natural Resources
and Energy and Co-Head of
Corporate Finance at Cavendish



FEDERICO GONZALES
Head of Paraguay
Ex Minister of Interior
& Interim Director of
ITAIPU Paraguay



EMILIO BUONGHERMINI
Operations Executive
Former Vice Minister of Mines &
Minerals in the Paraguay
Government



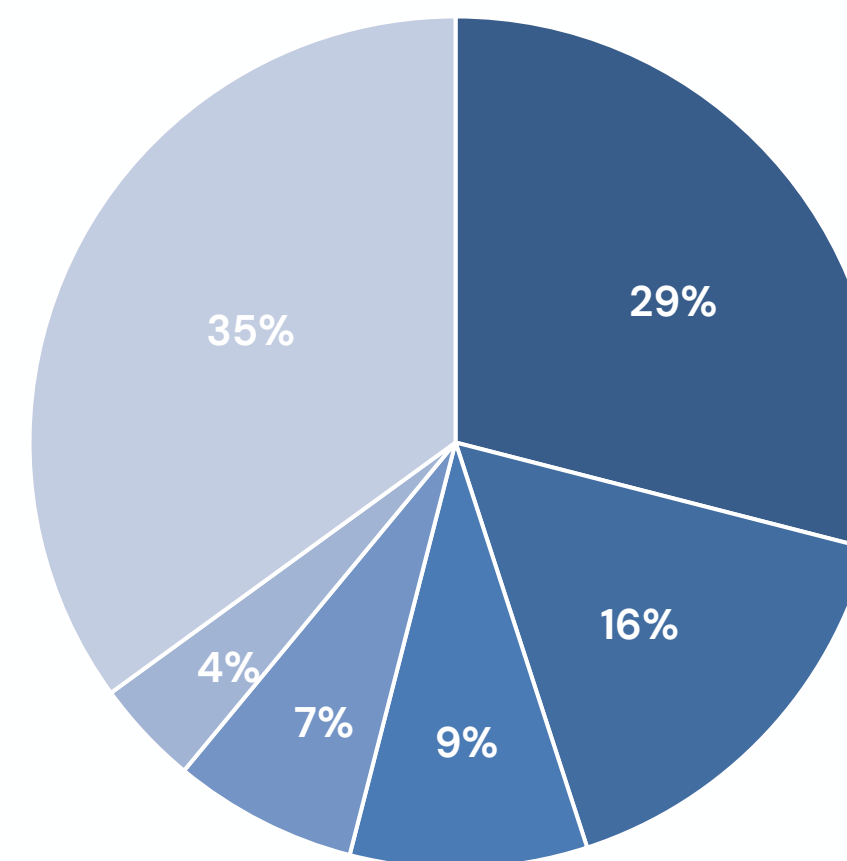
PABLO GUINDA
Head of Engineering
First Class Masters in Mechanical
Engineering from University of
Aberdeen. Ex GE and Technip



LOUIS WRIGHT
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MEng, Materials Science,
Trinity College, University of Oxford



EOIN O'SULLIVAN
Project Manager Green House Capital
PhD, Nanomaterials, University of
Oxford,
BSc, Advanced Materials, Trinity
College Dublin



- Peter Levine (via PLLG Investments)
- Trafigura (via Urion Holdings)
- Schrodgers
- Michinoko
- CF Miton Smaller
- Other

PRESIDENT OIL AND GAS: PARAGUAY

The Operator and Joint Owner of High Impact Exploration





- Exploration concession for the Pirity area, Chaco region of Paraguay
- Jointly owned 50/50 with CPC, the Taiwanese State Energy Company, **President operator**
- Drilling of high impact well commenced **10 January 2024**, expected target depth of 3,800 meters, drill time 45 days
- Compelling prize targeting complex of **260 mmbbls of Pmean un-risked resources**
- Drilling and complex **covered by 3D Seismic** acquired by President Oil & Gas in 2013 showing clear four way dip structure
- Exploration license to August 2024 gives ample time to drill, evaluate and in the event of discovery to convert to an exploitation license

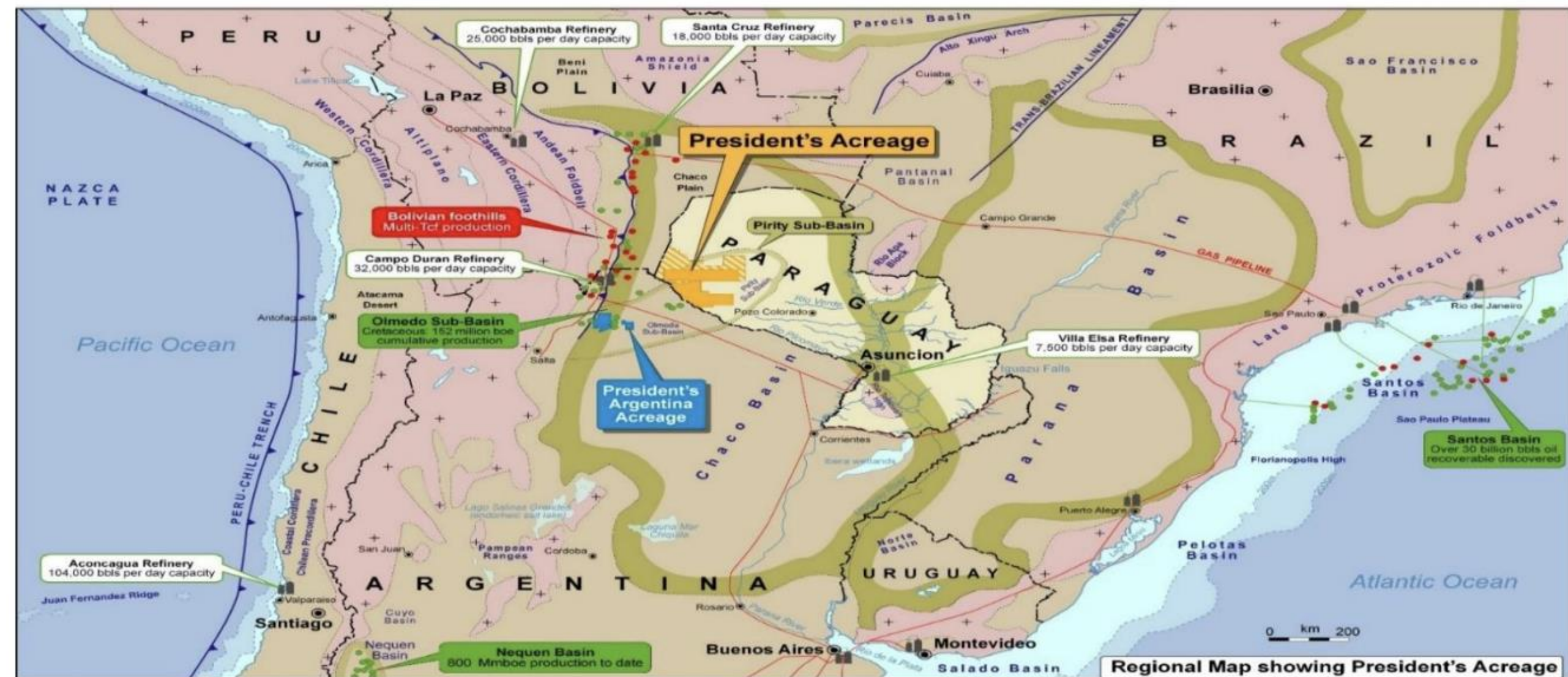


PRESIDENT OIL AND GAS: PARAGUAY

The Operator and Joint Owner of High Impact Exploration



-  Hydrocarbons don't respect borders
-  Tapir-x1 prospect is 40 kilometres east of major producing field in Argentina
-  Oil can be sold in Argentina or in Paraguay
-  If successful Molecular has a range of options including farm out, outright sale or continuation and has the local expertise to monetise the opportunity quickly





PRESIDENT OIL AND GAS: ARGENTINA

Revenue streams commenced in 2024 from sale of President Petroleum S.A.(the Argentine business)



US\$2 million

US\$2 million receivable in September 2024 subject only to continuation of normal operations.



US\$13 million

Repayment of US\$13 million of intercompany debt subject only to cashflow requirements.

The first US\$500,000 has already been paid, subsequent to the new Argentine Presidency taking effect in December 2023. Further monies expected in 2024.



US\$ Additional Consideration of Cash Flow Contribution

Over 5 years Molecular may receive a sum equivalent to 20% net free cash flow from Argentina.



GREEN HOUSE CAPITAL

Green House Capital ("GHC") is the owner and operator of a group of synergistic alternative energy, high-growth businesses, with scalable existing and near-term income generation

Each business benefits from inter-group connectivity, yet they remain independent through separate management and own self-funding strategies

- **Already revenue generating** with near-term **inflexion points** across Group having projected **significant revenue and order book growth** with intended dividends after three years
- **Innovative proprietary technology** in Group
- Each business **addressing existing, growing market demand** with their own unique selling points
- **Pipeline** of further, **near-term opportunities**
- **International operations and applicability**, headquartered in UK
- Support from **major strategic partners** as well as related parties
- Coming to **AIM 2024** as a spin out from Molecular Energies PLC ("MEN"), following on from the 2021 successful spin out by MEN of Atome Energy ("ATOME")
- Primary BID offering to give **broader investor access**





GREEN HOUSE CAPITAL

GREEN HOUSE GROUP COMPANIES



DUAL FUEL LIMITED

Proprietary and innovative dual fuel technology with hydrogen and diesel engines. Retrofitting fleet diesel trucks and barges to run on a blend of green hydrogen and diesel, reducing emissions and improving range. **Sales scheduled to commence mid 2024 with lead customers in place.**

www.dualfuellimited.com
info@dualfuellimited.com



Revenue generating with a growing order book. Originating, developing, advising and procurement of high-integrity carbon removal solutions and credits to businesses. **Already revenue generating.**

www.aton6.com
info@aton6.com



Developing and operating commercial scale carbon removal solutions for industry and agriculture including biochar with feedstock agreements in place. **Targeting installation by end of 2024.**

www.hysolimited.com
info@hysolimited.com

GREEN HOUSE GROUP STRATEGIC PARTNERS



Owner's Engineer to the Group
Global Fortune-500 engineering consultancy with US\$13.1 billion of revenue in 2022. Advises Green House companies on engineering and technical matters.



Assists Aton 6 with carbon credit origination, trading and sales support
Global financial services firm, with 30 international offices with expert experience in carbon credit origination and trading.



Assists DFL with dual fuel hardware and software

A UK based leader in dual fuel engine technology.

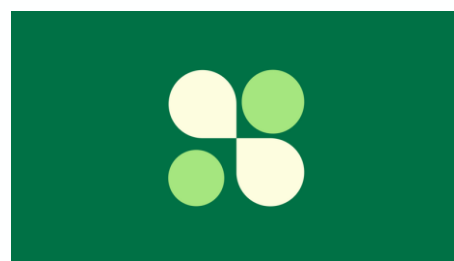


Provides investment expertise in the Americas

An established Paraguayan innovation fund with South American investment know-how and footprint.



Provides regional expertise and contacts
An international energy company on the London Stock Exchange



ATOME ENERGY PLC

Industrial Scale Production of Green Hydrogen, Ammonia and Fertiliser

- ATOME spun out from Molecular in 2021, prior to the IPO Molecular declared a dividend in specie to its shareholders by way of shares in ATOME equivalent to a 20% dividend
- Molecular holds 20.5% of ATOME. In 2023 Molecular sold 800k shares for £1 each demonstrating true realisation of value created resulting in a P&L gain of £800k
- A global leader in its field and intended to become the supplier of the world first green premium fertiliser in 2025, with major projects in Paraguay, Costa Rica and Iceland of 600 MW. First project Villeta, Paraguay
- The major projects in Paraguay benefit from low cost 24/7 renewable electricity from grid through the second largest hydroelectric dam in the world, 145 MW PPA signed
- 75 acre site already purchased for first major project in Paraguay
- Per RNS 17 January 2024:
 - FEED study and EPC progressing well and to be concluded in this Q1
 - Multiple offtake proposals received from leading international players with Company in advanced negotiations for offtake of Villeta's full production volume of its green fertiliser with concrete news expected this Q1
 - Company confident in finalising the Villeta Project financing with interest in the debt financing component extending to over 2x oversubscribed and interest from international heavyweight investors in the equity component all at project level
 - Pre-PPA studies in respect of the 300MW Yguazu Project to be completed this month to confirm best location for the project with the 300MW PPA targeted for this H1



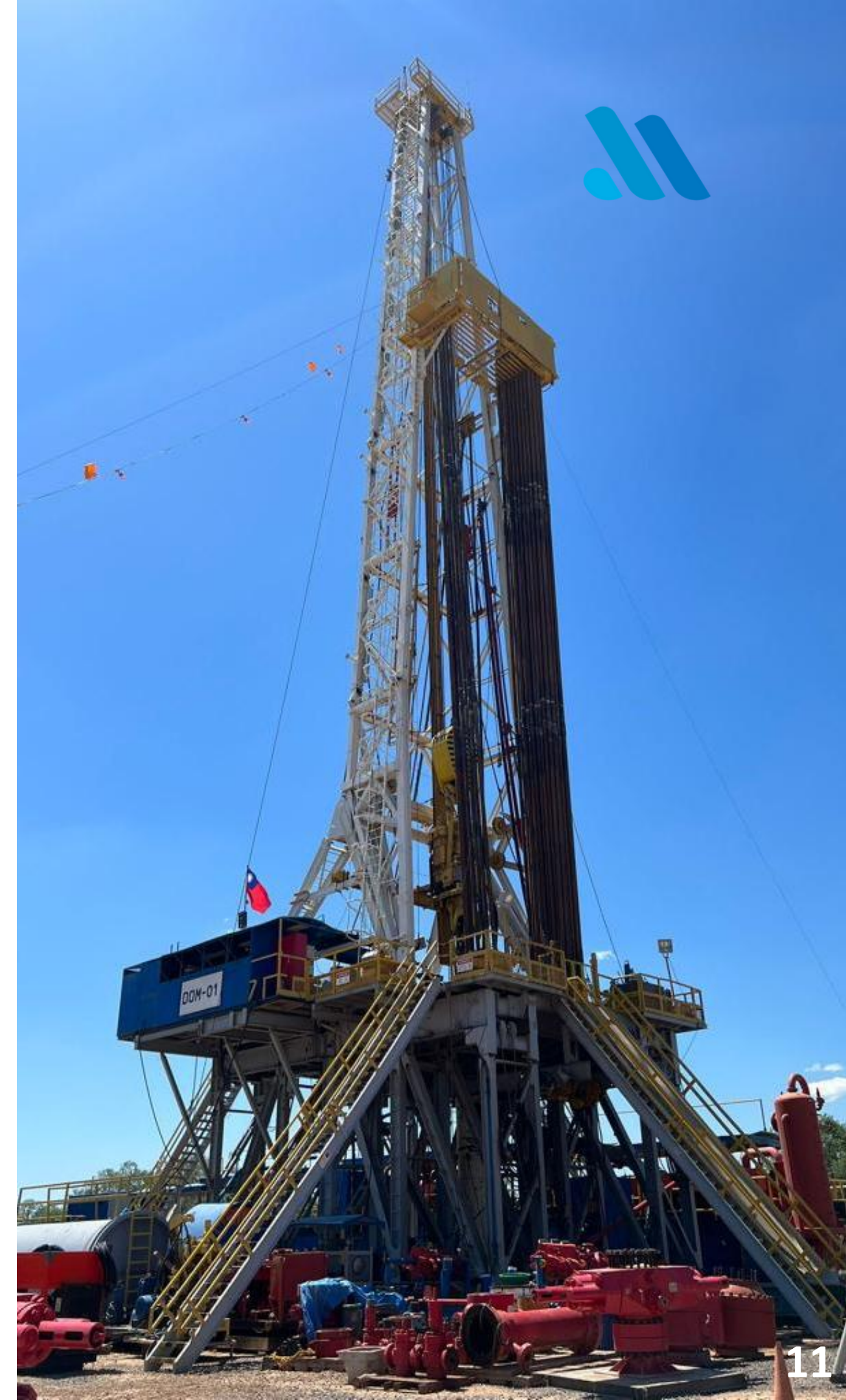
Summary and Use of Proceeds

Molecular has a proven track record of innovation and value creation.

A fundraise of at least £500k provides the financing necessary to pursue new ventures similar to Atome and Green House Capital for the longer-term benefit of shareholders beyond the catalysts already inherent in the Group.

Molecular gives exposure to five key business strands each with major inflexion points over the next 0-6 months:

- Highly prospective Paraguay exploration well – within 45 days
- Continued receipt of funds from sale of Argentine business – ongoing from this year
- Green House Capital Group plc IPO – Q1 2024
 - Dual Fuel – Commencement of retrofit program – H1 2024 – revenue 2024
 - HYSO – pilot plant – H2 2024 – revenue 2024
 - Aton 6 – Continued customer wins and partnerships – H1 2024 – revenue 2024
- Atome Energy
 - Upcoming news expected H1/Q3 2024 – per RNS of 17 January 2024
 - Completion of FEED study – Q1
 - EPC Contract – Q1
 - Offtake Agreement – Q1
 - Financing Update/FID – H1
 - Start of ground clearing – Q3
- New Business Opportunities – ongoing



Thank You

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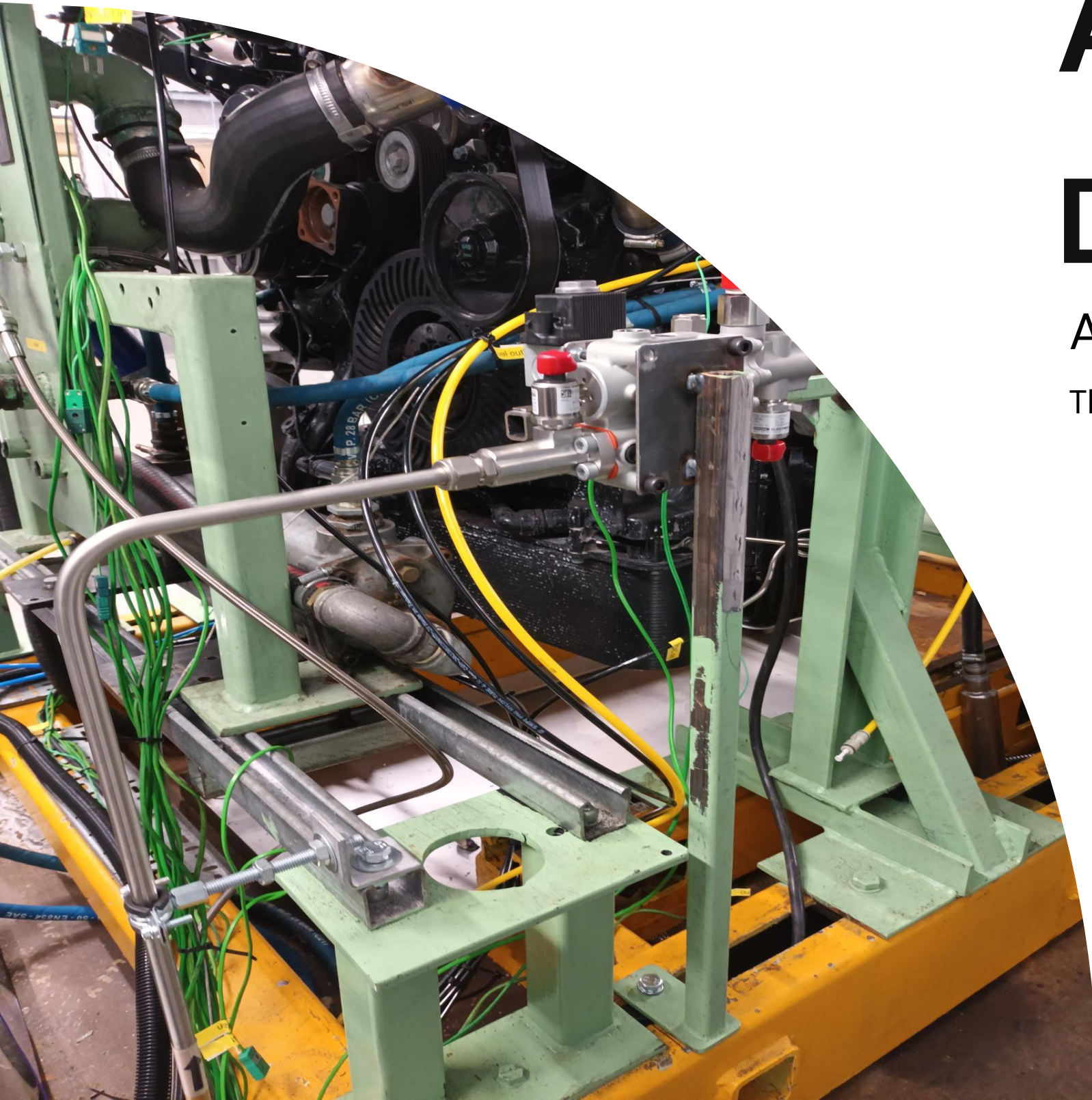
Molecular Energies PLC

APPENDIX

DUAL FUEL LIMITED

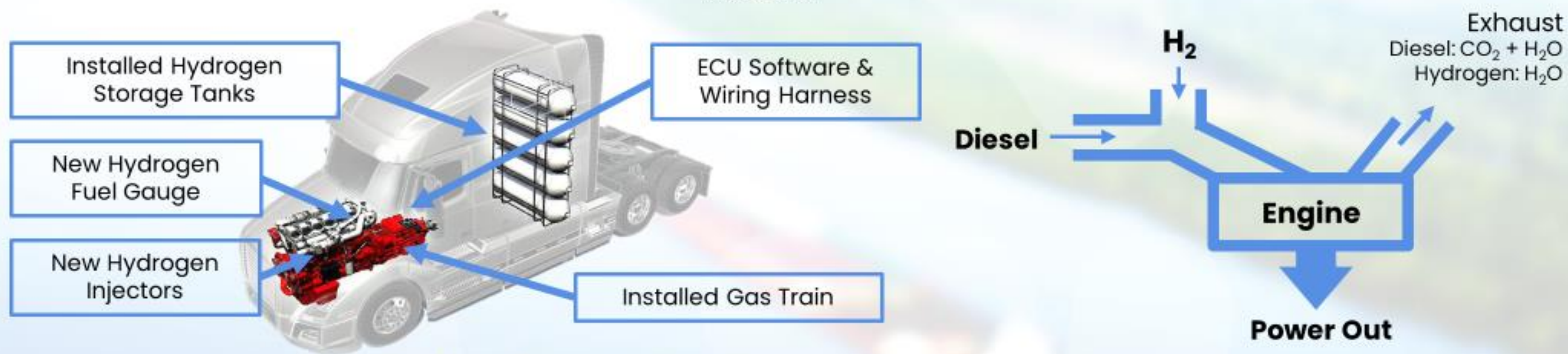
A member of the Green House Capital Group of companies

The following slides are taken from the Green House Capital Group Investor Presentation



Dual Fuel

DFL will provide a one stop shop transitional solution to decarbonising heavy road and barge transport by retrofitting existing diesel engines to run on a mixture of diesel and hydrogen avoiding buying expensive new vehicles



Dual Fuel Engineering ("DFE") has developed its own innovative technology to reduce emissions



Decarbonisation Pressure

Stakeholder pressure to reduce emissions, with public emission goals being set amongst governments



Mobility

Hydrogen the only cost-effective solution for heavy vehicles and barges



DFE the best transition

Mobility must reduce emissions but pure hydrogen trucks are expensive and require network of refueling stations



First Country of Operation: Paraguay

Landlocked, 75000 HGVs, 2000 barges, no active railways and govt. support with lead customer agreement already in place. Depends 100% on imports for its hydrocarbons.



Global Applicability

Europe, Mercosur and North America after proof of concept

Dual Fuel

USP

REVENUE

Commercial



Emissions

31% emission reduction already achieved in initial testing.



Affordable Technology

Economic, cost-effective price. Can use existing vehicle fleet avoiding scrapping and buying expensive new ones



Immediate Solution

First retrofit available in 2024



One-Stop-Shop Solution

Green hydrogen near diesel parity

Performance



Speed of Retrofit

Installed on existing vehicles in under a week



Speed of Refueling

Hydrogen refueling can be as fast as 45 mins



Fuel Flexibility

Able to run on diesel alone. No refueling network required



Additional Range

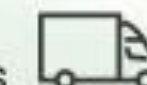
300km added range in trucks and 30% extended range/run time under normal conditions

Competition



Cost and Availability

Fuel cells and battery vehicles expensive, not commercially readily available and have long lead times



Big Cost New Vehicles

The alternative of DFE means having to buy new vehicles



Reduced Useful Load

Batteries are very heavy, resulting in reduced load



Range

Short ranges require frequent charging. Limited existing refueling infrastructure.

Providing a One-Stop-Shop Solution

1. Retrofit Package
2. Finance Where Appropriate
3. Fuel Take or Pay
4. Carbon Offset Sales Through Aton 6

Q1 2023

Q2 2023

Q3 2023

Q4 2023

Q1 2024

Q2 2024

Q3 2024

Q4 2024

Paraguay Identified as first Commercial Geography

Contract for engineering support

Agreement in Place with lead customer for Fleet Retrofits

Paraguay Automotive Engineers Identified

Vehicle Testing at UK Test Cell & Rolling Road Facility

First Dual Fuel Vehicle in Paraguay

First Revenue Generation

First 30 Vehicles Retrofitted