



Racing. Green.

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Table of Contents

The Icon – Aston Martin Lagonda

Sustainability: “Racing. Green.”

Tackling Climate Change: Green Battery Cell

AML Cell

Q/A

ASTON MARTIN

AN ICON...

➤ *World's most desirable ultra-luxury British performance brand creating the most exquisitely addictive performance cars with*

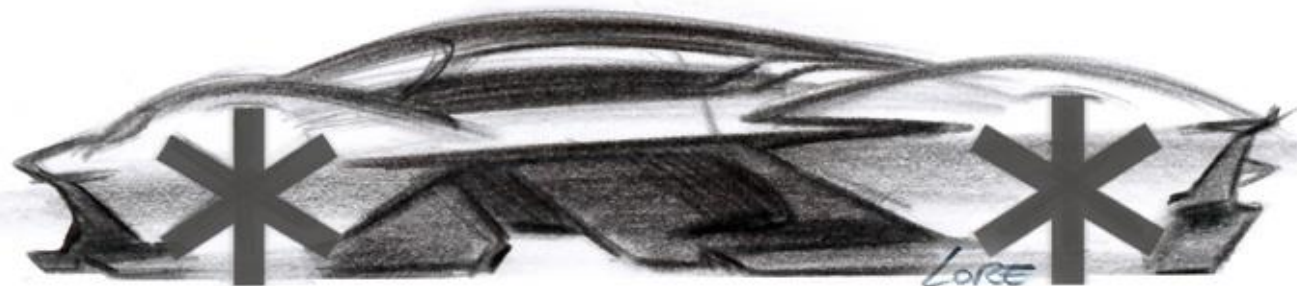
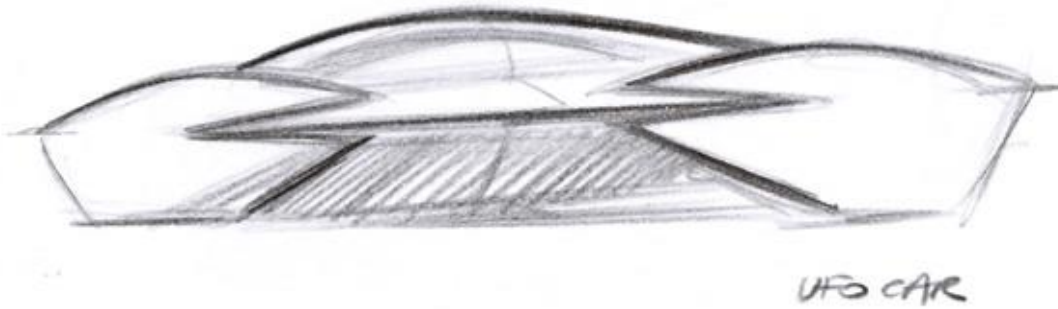
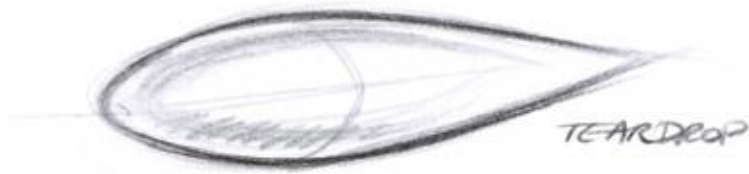
✓ *style,*

✓ *luxury,*

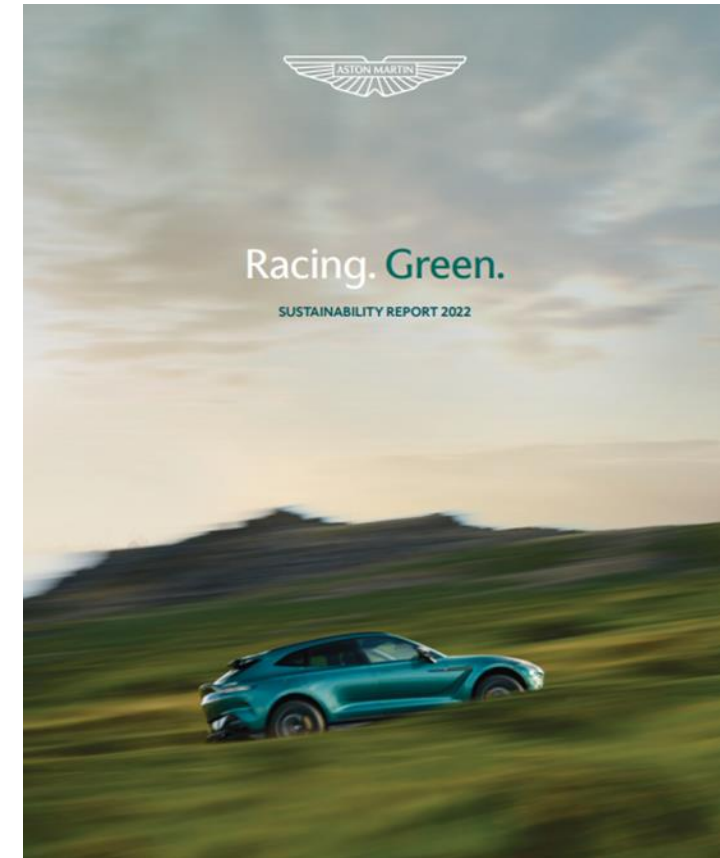
✓ *exclusivity,*

✓ *latest technology,*

✓ *time-honoured craftsmanship!*



Aston Martin Sustainability Strategy, “Racing Green” Launched in April 2022



“Our sustainability strategy is shaping our transformation as we take action to turn our aspirations into reality, **making sustainability central to everything we do.**”

Amedeo Felisa, CEO, Aston Martin Lagonda

More information : www.astonmartinlagonda.com/sustainability

Racing. Green.

Sustainability Strategy

- *The ambition to be a world-leading sustainable ultra-luxury automotive business.*
- *This ambition is a key pillar of our corporate strategy and the central objective of our sustainability strategy 'Racing. Green.'*
- *Our strategy is built on five core priority areas aligned with*
 - *the UN's Sustainable Development Goals,*
 - *and a deep understanding of the priorities that our customers, employees and other stakeholders care about.*
- *Implementation and action is taken by 10 Working groups active across the entire business.*



Tackling Climate Change: Transforming Products

Future Fleet

In 2024 Aston Martin will commence its delivery of **Valhalla**, our first Plug-in Hybrid Electric Vehicle ('PHEV'), followed by our first Battery Electric Vehicle ('**BEV**') targeted for launch in 2025 and a fully electrified sports cars and SUV portfolio by 2030.

Sustainable Innovation

Sustainability is increasingly embedded in the architecture of our vehicle design process.

- Lowering the energy needed to manufacture our vehicles.
- Offering high-yield recyclability.
- Developing of lightweight battery → 30% to 50% reduction in mass.
 - Exploring **green battery cell technology** that enables high-yield recyclability and a capability to reduce CO₂ emissions by up to 90% compared with conventional cells.



Tackling climate change

2019

100%

use of renewable electricity to power our manufacturing operations

2022

CO₂

Reduce CO₂ emissions from our manufacturing operations by 2.5% year-on-year*

Reduce CO₂ emissions intensity and energy consumption per car by 2.5% year-on-year*

2024

PHEV

Commence delivery of our first PHEV

2025

BEV

Target for launch of our first BEV

2030

Fully electrified

sports and SUV portfolio

Net-zero

manufacturing facilities

30%

reduction in supply chain CO₂ emissions (from 2020 baseline)

2039

Net-zero

across our supply chain

ASTON MARTIN

AML CELL

What to expect from an AML Cell!

An “AML Cell”



✓ Long range



✓ High performance



✓ Fast charging



✓ Safe



✓ Long lifespan

Requirements

Energy and power dense cells that can be used safely in a wide temperature range for a long time.

| AML (x)EV Musts | Cell Level Correspondence |
|-------------------|--|
| Range | Energy density |
| Performance* | Power density (*Ability to deliver high power on demand) |
| Fast charging | XFC capability |
| Safety | Electrical, mechanical, thermal limits |
| Long lifespan – 1 | Cycling aging capabilities |
| Long lifespan – 2 | Calendar aging capabilities |

Goal

➤ A novel cell chemistry and design that would combine the fast charging and discharging capability of a power cell with the long-ranged energy cell.

An “AML Vehicle”

| AML BEV | |
|-------------------------|-------------|
| Mass | ~ 2000 kg |
| Seats | 2 |
| Speed | 300 kph |
| Acceleration (0–60 mph) | < 4 seconds |



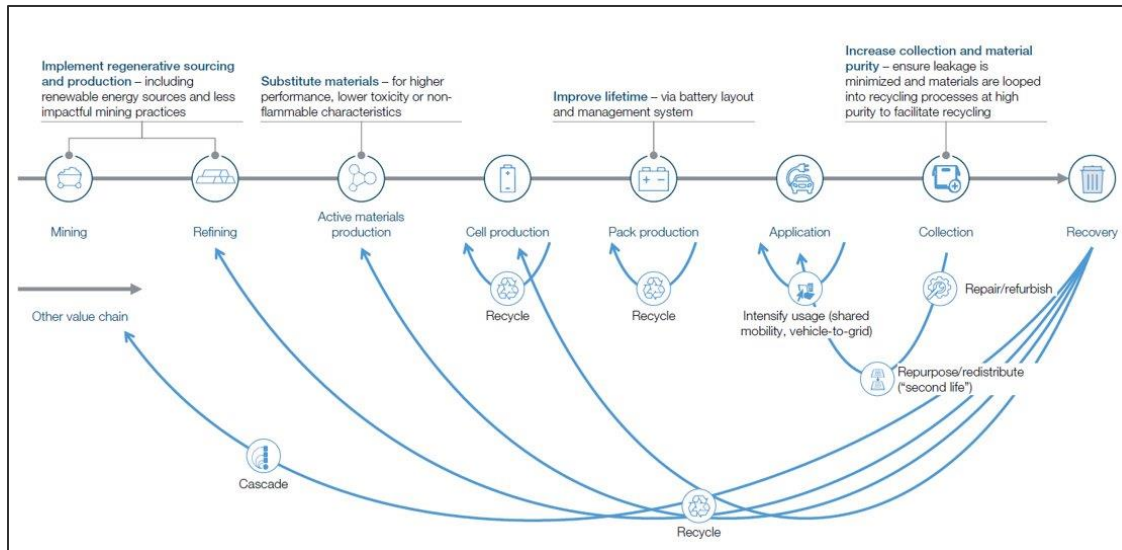
| AML Cell | |
|-------------------------------|--|
| Energy density | > 270 Wh/kg |
| Fast charging (up to 80% SOC) | 10 – 12 minutes |
| Operating temperature | $(-20)^{\circ}\text{C} < T < 60^{\circ}\text{C}$ |
| Lifespan goal | 8 years / 100,000 miles |

↑
High performance:
Aston Martin Vantage
F1 Edition.



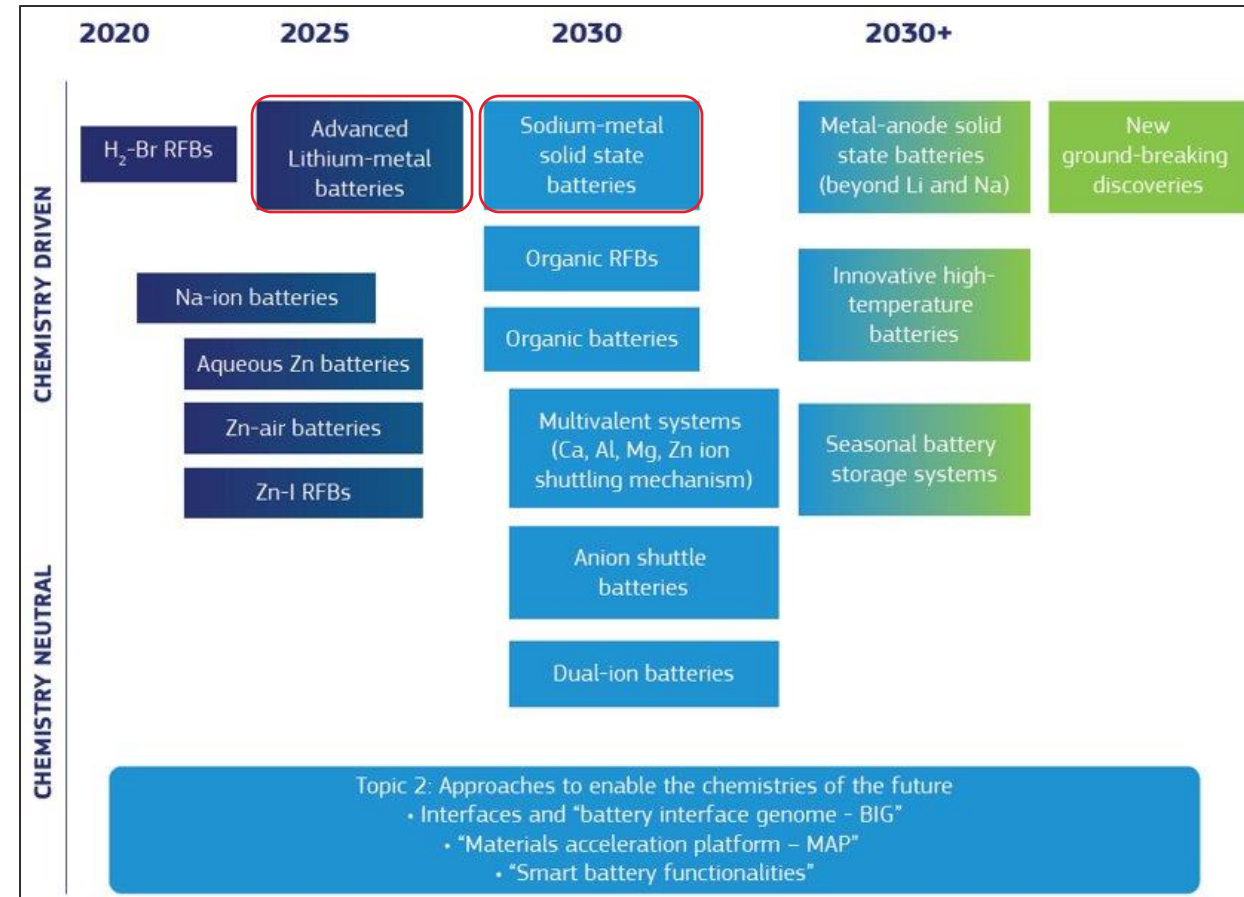
Evaluation Criteria

1. Technology
2. Circular Economy (Recyclability – 2nd Life)



3. Manufacturing Sustainability

➤ World Economic Forum identified 12 key levers, grouped in 3 categories: 1) levers to build a circular value chain, 2) sustainable business and technology levers, and 3) levers to establish a responsible and just value chain.



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Thank you.

Contact Details

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