# easyJet NET ZERO PATHWAY 2022



### **SUSTAINABILITY**

- > We are already a highly efficient operator, with carbon emissions intensity c.18% lower than the global average<sup>1</sup>
- > Our continued focus on sustainability;
  - In 2021 we demonstrated our first ever SAF flight with 30% blend out of London Gatwick
  - Ultra low emissions turnaround trials at Bristol Airport resulted in a 97% reduction in CO2
  - Ground-breaking partnerships with Airbus and Rolls-Royce
- > easyJet signed up to the UN-backed Race to Zero in November 2021
- Next step in easyJet's sustainability journey;
  - Setting out our Net Zero roadmap, which provides the framework by which we intend to meet our commitment to Net Zero in 2050

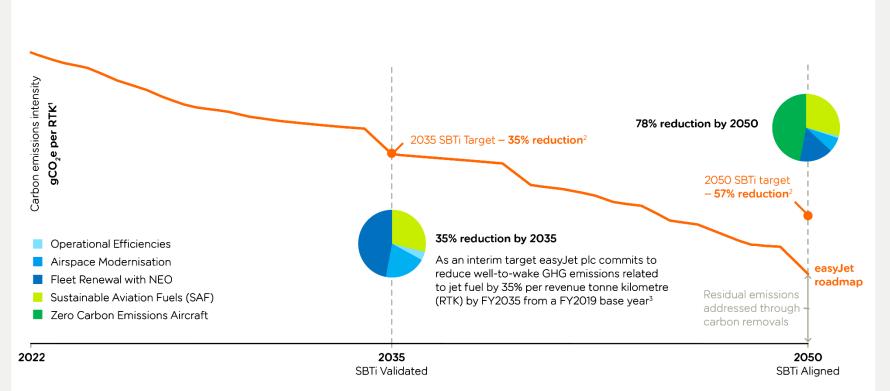
#### Decarbonisation is fundamental to easyJet's long-term strategy

1) Based on global narrowbody CO<sub>2</sub>/RPK in 2019 (ICCT)

# **ROADMAP TO NET ZERO BY 2050**

### Aligned with Science-Based Targets initiative (SBTi)

- > Ambition to deliver 78% carbon emission intensity reduction by 2050 with residual emissions addressed through carbon removals
- Pioneering developments to deliver industry leading emission reductions



1) RTK = Revenue Tonne Kilometres. 2) Based on SBTi aviation sectoral decarbonisation pathway for well below 2°C scenario. Targets versus FY 2019 baseline as the last normal operating year. 3) The target boundary includes biogenic emissions and removals from bioenergy feedstocks (SAF).

### **DRIVING CHANGE**



#### **Fleet renewal with NEO**

Minimise fuel burn and emissions through current technology

> 168<sup>1</sup> NEO aircraft to be delivered up until FY29



#### **Operational efficiencies**

Fuel savings through initiatives including single engine taxi and engine washing

- > SkyBreathe fuel management tool
- > Descent profile optimisation



#### **Airspace modernisation**

10% reduction by 2035 through Single European Sky and modernisation of UK airspace

> Advocating for change by decision makers



#### Sustainable Aviation Fuels (SAF)

Use at scale in line or above Refuel EU proposed mandates

 Long term supply agreements with fuel suppliers



#### Zero carbon emission aircraft

Committed to be an early adopter in transitioning the fleet

 Partnerships including; Rolls-Royce, Airbus, Cranfield Aerospace Solutions, and GKN Aerospace

#### **Carbon removal**

Residual emissions will be removed to reach Net Zero by 2050

Member of 1PointFive/Carbon Engineering/Airbus consortium

**Carbon offsetting:** easyJet was the first airline in the world to offset carbon emissions from all flights since Nov 2019<sup>2</sup>. easyJet is now transitioning away from offsetting to focus investments on driving in-sector emission reductions to deliver our Net Zero roadmap

1) As at 16 August 2022 2) easyJet will stop offsetting bookings after 31 Dec 22

### GOVERNANCE

#### Sustainability governance

- > The recommendations and management of the sustainability function are signed off, and approved, by a steering committee and the management board
- > The PLC board are updated quarterly and will approve any changes in strategy and major spend

#### Fleet acquisition governance

- > All fleet transactions will follow the standard evaluation and approval process and will be subject to financial viability
- > Fleet transactions undergo 6 layers of review, culminating in approval from the PLC and, if a Class 1 transaction, shareholder approval

### CEO and CFO remuneration aligned sustainability targets set

#### Johan Lundgren (CEO)

- Commit to and deliver easyJet's Net Zero Roadmap integrated with core business strategy
- Achieve Stage 1 and Stage 2 IEnvA certification for Environmental Management System (EMS)

#### Kenton Jarvis (CFO)

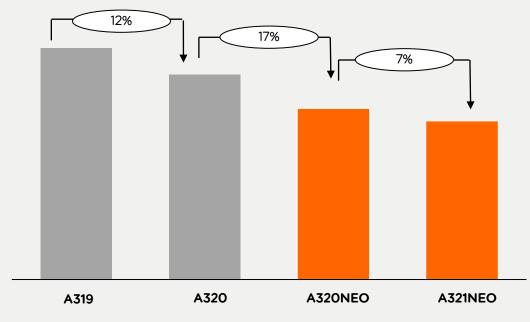
- Develop Climate Change Risk Register identifying priority Climate Change Transition Risks and confirm mitigating actions and accountabilities
- Improve ESG reporting and performance via gap analysis of easyJet FY21 reporting and publish ESG report to enhance 2022 scores

# easyJet DRIVING CHANGE



### **A320NEO FAMILY FLEET RENEWAL**

#### Aircraft type: Average fuel burn per seat<sup>1</sup>



#### **Current fleet**<sup>2</sup>

A319	A320	A320neo	A321neo
94	167	44	15

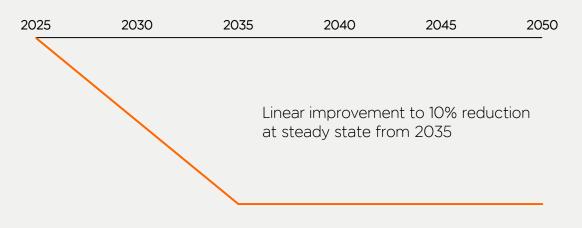
- > Fleet replacement with A320neo and A321neo provides significant short and medium term improvements in emissions intensity
- > 17% more fuel efficiency & 50% noise footprint reduction
- > Up gauging by replacing A319 & A320s with A320neo and 321neo aircraft
- > Potential upside through;
  - Faster growth driving increase in proportion of NEO
  - Increase in proportion of A321neo
  - Accelerated retirement of A319, currently expect all A319 to have left the fleet by 2029
- Continued investment through approved purchase of a further 56 A32Oneo family aircraft to be delivered between FY26 and FY29

1) Per trip hour, kg FY19. 2) Fleet as at 16 August 2022.

### **AIRSPACE MODERNISATION**

Driving 10% reduction in CO<sub>2</sub>/RPK

### Carbon intensity reductions due to airspace modernisation<sup>1</sup>



> A 10% reduction in industry emissions would prevent c.15m tonnes<sup>2</sup> of CO<sub>2</sub> from being released annually in EU skies

#### **Current** airspace

- > UK and EU consists of a complex network of flightpaths that have seen little development over the last 70 years
- > This causes additional fuel burn through aircraft operating inefficient indirect routings and climb and descent profiles

#### **Collaboratively advocating for change**

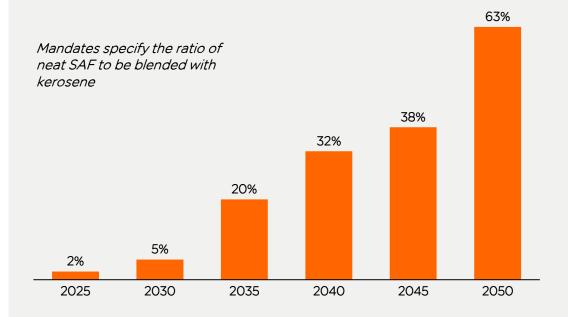
- > Aim to enable aircraft to fly more direct, precise routes cutting unnecessary fuel burn and emissions
- Implementing an advocacy strategy that targets national decision makers, alongside other airlines, to drive the decarbonisation of EU and UK airspace

1) % reduction in CO<sub>2</sub>/RPK by year 2) Based on c. 150m MT commercial aviation net CO<sub>2</sub> emissions for flights within the EU and departing EU in 2019 (EU - Destination 2050).

# SUSTAINABLE AVIATION FUELS (SAF)

- SAF mandates are outlined in the Refuel EU proposals
- > easyJet's investment focus remains on the longterm solution of zero carbon emission aircraft

#### SAF mandates as per EU Fit for 55 proposal<sup>1</sup>



#### SAF is a transitionary measure

- SAF enables lifecycle CO<sub>2</sub> reduction and will bridge the gap to the transition to zero carbon emission aircraft
- SAF still results in CO<sub>2</sub> emissions, unlike hydrogen which produces no CO<sub>2</sub> emissions

#### **Sourcing SAF**

- SAF currently purchased through offtake agreements with regular fuel suppliers who have direct contracts with neat SAF producers
- Current expectation is that mandates will drive a major scaling up of the SAF industry
- In the short term there is sufficient SAF production to secure delivery from our fuel suppliers

1) % of neat SAF blended with kerosene

### **ZERO CARBON EMISSIONS AIRCRAFT**

#### Ambition to operate the cleanest aircraft available

- Minimising emissions is not only the best path for the planet, but also potentially financially due to escalating carbon costs and future non-CO<sub>2</sub> taxes materially increasing the cost of burning fossil fuels
- > While we are open to all possibilities, Hydrogen aircraft currently offer the most promising path forward through;
  - Hydrogen combustion in air breathing engine
  - Hydrogen fuel cell powering an electric motor
  - Hybrid combustion/fuel cell

#### **Fleet transition**

- Intention to concentrate early zero carbon emission fleet at a single airport, likely starting with domestic services
- Due to it's low weight, hydrogen offers the opportunity to tanker fuel at negligible cost, which would allow easyJet to operate return trips from a base airport without refuelling down route

#### Zero carbon emissions aircraft as % of all deliveries

Ramp up of deliveries will be dependent on OEM supply capability, CAPEX and operational readiness



# **ROLLS-ROYCE – HYDROGEN PROPULSION SYSTEMS**

easyJet is the exclusive airline partner of Rolls-Royce to pioneer zero carbon emissions air travel with research and demonstrator collaborations on hydrogen propulsion systems for narrowbody aircraft

#### Hydrogen turbofan development and testing

- Providing the commercial and operational inputs to drive specifications and design of clean-sheet propulsion systems
- > Physical demonstrator with ground rigs, engine and potentially flight testing of complete hydrogen propulsion systems for narrow-body aircraft.
- The programme will include hydrogen storage, management, delivery and propulsion with a modified Rolls-Royce Pearl 15 engine



The combined and complementary strengths of the easyJet and Rolls-Royce brands sends a powerful message on the potential of hydrogen in aviation



# **AIRBUS – ZERO CARBON EMISSIONS AIRCRAFT**

easyJet was the first airline to partner with Airbus on the ZEROe programme to drive forwards zero carbon emissions aircraft technology

- > easyJet was the first airline to partner with Airbus to discuss hydrogen and electric aircraft concepts in 2019
- The consortium now includes a number of global airlines including Air New Zealand and Delta Airlines
- > Holistic approach to accelerating zero carbon emissions air travel, engaging with all elements of the hydrogen ecosystem from production to operation
- > Collaborative approach to understanding the operational and infrastructure opportunities and challenges, and promoting stakeholder awareness of the potential of zero carbon emissions aircraft





# **DEVELOPMENT OF HYDROGEN ECOSYSTEMS**

easyJet is collaborating with a number of partners to support the development of the hydrogen ecosystems required to enable commercial zero carbon emissions flying at scale

#### **Regional aircraft programmes**

- Small regional aircraft will be the first zero carbon emissions aircraft to take flight and will lead the development of the ecosystems required to scale the technology towards a commercially viable state
- > easyJet has partnerships with a number of pioneers developing hydrogen and hydrogen-electric aircraft, providing commercial and operational expertise to support their development

#### Hydrogen infrastructure and technology

- > easyJet is a core member of Hydrogen Southwest, an infrastructure ecosystem that brings the benefits of hydrogen to the South West of England, as part of which easyJet is driving a pilot project named 'Project Acorn';
  - easyJet will drive the research and development of hydrogen powered Ground Support Equipment (GSE) at Bristol Airport
- easyJet collaborating with SEA<sup>1</sup> to investigate hydrogen infrastructure requirements, and wider sustainability, at Milan airports



easyJet

1) SEA are the operators of Milan Airports

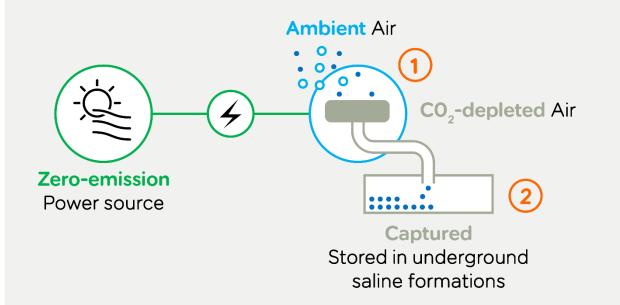
NET ZERO PATHWAY







# **DIRECT AIR CARBON CAPTURE AND STORAGE**



- 1 Direct Air Carbon Capture: Ambient air is passed through filters which extract CO<sub>2</sub>
- Storage: Captured CO<sub>2</sub> is compressed and injected into saline formations over a kilometre below the earths surface<sup>1</sup>

### Carbon removal is more effective at mitigating climate change

- DACCS removes CO<sub>2</sub> from the atmosphere whereas offsets do not - they prevent the emission of further CO<sub>2</sub>
- > Carbon removals are recognised by the SBTi as contributing to Net Zero, whereas offsets are not

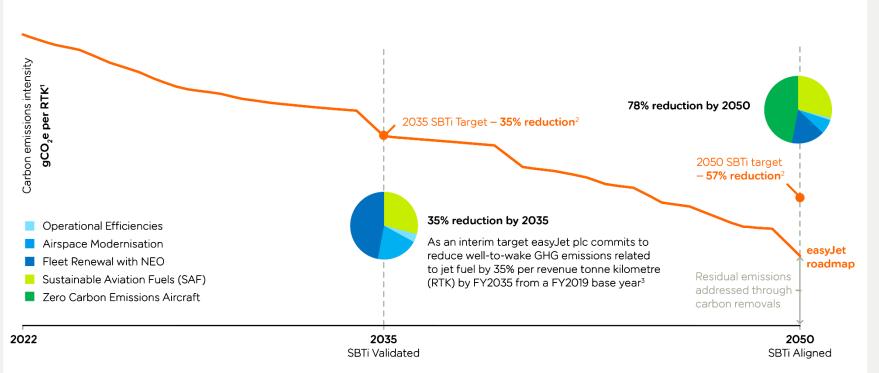
#### **Industry leading investment**

- > One of the first airlines in the world to invest in a new technology recognised as critical to a Net Zero world
- Committed<sup>1</sup> to purchase a set amount of Carbon Dioxide Removal (CDR) units for 4 years from 2025 at a fixed cost
- > Provides early access to CDRs and develops the partnership to ramp up volume in the future provided it is commercially viable

<sup>1)</sup> LOI signed, subject to contract terms

## SUMMARY OF NET ZERO ROADMAP

- SBTi aligned roadmap with targets to achieve
  - 35% emission intensity reduction by 2035
  - 78% emission intensity reduction by 2050 – residual emissions removed through carbon removals
- Focus on new technology to achieve zero carbon emission flying in the long term
- Sustainability investments to focus on this roadmap



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# easyJet Q&A



# easyJet APPENDIX



### nextGen Sustainability

Pioneering positive change for our planet, communities and people. Getting one step closer to net-zero every day.

### Reducing our impact today for a better tomorrow

We work tirelessly to minimise the environmental impact across our operations.

- Focused on reducing the carbon intensity of our flying
- Tackling waste and plastic reduction within easyJet and our supply chain
- Continuously addressing our noise impact
- Environmental management system – ISO 14001 compliant

#### Pioneering future travel

easyJet's support in the development of zero carbon emission technologies will shape the future of flying.

- > Signed up to Race to Zero
- Driving change to deliver our Net Zero transition roadmap
- Collaboration and partnerships to achieve zero carbon emissions aviation
- Advocating for effective carbon regulation and new technology

#### Driving positive change in society

Positively impacting our people, customers and communities to maximise the social and economic benefits of travel and tourism.

- > Creating an inclusive workplace
- > Remaining an employer of choice
- Making sustainable travel accessible to everyone through easyJet holidays.
- Supporting charitable causes that are important to our customers and employees

#### Underpinned by strong governance and monitoring at board level to drive delivery of this strategy