

1.4 This paper outlines the financing required to meet the transition, including the role of banks, institutional investors, blended finance and how ICAO can play a key role in assisting the finance elements of SAF deployment.

2. SCALE OF FINANCING NEEDED FOR THE SAF TRANSITION

2.1 Estimates vary of the financing required to fulfil the transition to meet net-zero emissions for the aviation sector, but the financing for the capital investment in SAF production is substantial. The ICAO *LTAG Report* analysis suggests a capital investment of \$3.2 trillion will be needed for SAF development before 2050¹. The ATAG *Fueling Net Zero* analysis suggests \$1.45 trillion capital investment in new fuels².

2.2 Though these are large numbers, they compare very reasonably to the typical annual capital expenditure of the global oil and gas industry. According to analysis by the International Energy Forum, \$499 billion was spent by the oil and gas industry on upstream infrastructure in 2022 alone, with an expected \$4.9 trillion capital expenditure between 2023 and 2030³.

2.3 Because of the nature of the transition and the current lack of enthusiasm from traditional energy providers, at least initial stages of the transition will be mainly driven through new energy companies which produce other renewable fuels already or focus specifically on SAF. Therefore, there is a need for significant interaction with the finance sector to ensure it is prepared for the necessary investments in the decades ahead.

3. RESPONSE OF THE FINANCE COMMUNITY

3.1 There is sufficient investment capital to support the energy transition, even with the financing demands from other sectors as they decarbonise. With supportive policy conditions, the energy supply sector is seen as a stable, long-term investment and the climate-related aspects of the shift to SAF follow many of the guidelines being adopted by financial institutions as they shift portfolios to be net-zero and Paris Agreement-aligned.

3.2 The available capital is significant and covers a wide range of sources and financial mechanisms. Private capital investments in infrastructure reached \$172 billion in 2021, 60% of which were in green categories (mostly renewable energy)⁴. The OECD estimates that its members delivered \$204 billion in overseas development assistance in 2022⁵. It is estimated that institutional investors have some \$200 trillion in funds worldwide. The Net Zero Banking Alliance, bringing together more than 40% of global banking assets, is part of a wider group of financial market actors – the Glasgow Financial Alliance for Net Zero⁶ which aims to coordinate efforts across all sectors of the financial system to accelerate the transition to a net-zero global economy.

¹ ICAO LTAG Report, 2022: www.icao.int/environmental-protection/LTAG/Pages/LTAGreport.aspx

² Air Transport Action Group and ICF report *Fueling Net Zero*, September 2021: www.aviationbenefits.org/W2050

³ International Energy Forum *Upstream Investment Report 2023*: www.ief.org/focus/ief-reports/upstream-investment-report-2023/download

⁴ G20 Global Infrastructure Hub *Infrastructure Monitor 2022*: <https://cdn.gihub.org/umbraco/media/5262/gih-infrastructure-monitor-2022-report-may-2023.pdf>

⁵ OECD, *ODA levels in 2022, preliminary data*, April 2023: www.oecd.org/dac/financing-sustainable-development/ODA-2022-summary.pdf

⁶ Glasgow Financial Alliance for Net Zero: www.gfanzero.com

3.3 A survey⁷ of 20 major financial institutions has shown that two thirds of them have an active interest in investing in SAF, or are already doing so. When asked about the types of policy required to make the business case, two elements stood out: a long-term, stable policy environment; and early-stage risk-reduction measures such as government guarantee schemes and certainty of demand.

4. ROLE OF INNOVATIVE FINANCING MECHANISMS

4.1 Whilst there is starting to be significant investment interest in developed economies where the early demand for SAF will be highest, if aviation at a global level will reach net-zero carbon, there will need to be SAF developed in countries all over the world. A vast majority of States will have opportunities to develop a SAF industry: improving energy security, creating new green energy sectors and in the processes supporting or transitioning an estimated 14 million jobs⁸. But not all States have the same levels of risk, so blended finance could be a way to create an investment case for SAF deployment.

4.2 Blended finance is a financing approach that combines public and private sector funding to mobilise additional investment in development projects and initiatives in emerging markets. The goal of blended finance is to attract private sector investment to projects and sectors that have a clear development impact but may not be considered commercially viable by investors. The most common form of blended finance is the use of public or philanthropic funds, such as development finance or grant funding, to de-risk or catalyse private sector investment. This can take the form of guarantees, credit enhancements, or other forms of risk mitigation. By reducing the perceived risk of the investment, blended finance aims to make it more attractive to private investors and encourage them to invest in projects that they may not have otherwise considered.

4.3 The transition will need a coordinated approach between public sources of finance (particularly in the early stages to de-risk investment because of nascent technology or processes; or to provide de-risking of investment in emerging markets) including multilateral development banks, public support from donor countries and some philanthropic investments. The significant scale-up which will be required can then be continued with private capital and institutional investors.

5. ICAO ROLE IN FINANCING

5.1 Rather than fund the development itself, ICAO can play a very useful role in bringing together States in need of SAF investment with the sources of investment assistance, be they: multilateral development banks, institutional investors, philanthropic organisations or other forms of financing assistance. This ‘matchmaking’ service such as the proposed ICAO Finvest Hub will be vital in ensuring that the aviation energy transition is able to benefit States all over the world, in line with ICAO’s No Country Left Behind philosophy, whilst also fulfilling the investment needed in decarbonising the sector.

5.2 ICAO can also provide significant visibility for the challenge by engaging, at the highest level, with the global multilateral development banks and other UN system agencies.

⁷ ATAG and ICF survey of financial institutions in July 2023: https://atag.org/media/oy3douye/survey-on-saf-financing_july-2023.pdf

⁸ ATAG and ICF report *Fueling Net Zero*, September 2021: https://aviationbenefits.org/media/167495/fueling-net-zero_september-2021.pdf

6. ACTION BY CAAF/3

6.1 The Conference is invited to:

6.1.1 Take note of the need for finance to be seen as a significant factor in the success of the aviation sector's global application of a net-zero carbon-aligned energy transition.

6.1.2 Promote and encourage the use of innovative financing mechanisms, such as blended finance, for capitalising the investment needed in SAF deployment in all countries around the world.

6.1.3 Encourage the ICAO Council to rapidly deploy the resources needed for bringing together the finance requirements for SAF – including the use of a matchmaking hub for SAF finance. High-level coordination, particularly with MDBs, is also encouraged.

APPENDIX A

[ATAG papers on SAF finance and blended finance]