

FUTURE OF AVIATION SERIES

THE UAE'S COMMITMENT TO SUSTAINABLE AVIATION

COP28 in the UAE

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai opened the the 28th meeting of the UN's Climate Change Conference of Parties (**COP28**) held in the backdrop of Dubai's stunning Expo City with the focus on *"the preservation of our planet for future generations"*.

With almost 100,000 registrants including heads of state, ministers, corporate officials, delegates and experts from some 198 countries present, COP28 was attended by almost three times that of Glasgow's COP26 and four times the 2015 COP21 conference in Paris that saw the formation of the 'Paris Agreement' (to strengthen the global response to climate change) highlighting the importance of the climate agenda to the world's leaders.

Focus on Aviation

The Middle East is home to some of the world's largest airlines with an average fleet age of 10.2 years, below the global average of 11.6 years. Delivery of new aircraft has suffered since the Covid-19 pandemic when a large number of aircraft were put into storage and new deliveries came close to a standstill. Post Covid, many airlines have focused on the modernisation of aircraft fleet, which as noted by IATA, is driven by a number of factors including utilising newer aircraft with lower fuel consumption to reduce both airline's fuel costs and importantly, CO2 emissions.

The primary talks in the UN's run 'Blue Zone' of COP28 centered on the negotiations for the (now agreed) landmark deal to see a global transition away from fossil fuel consumption with aviation taking a front seat with the world's eyes focused on the industry's plans to combat climate change and reduce aircraft emissions.

COP28 comes shortly after the Dubai Airshow and ICAO's Conference on Aviation and Alternative Fuels (**CAAF/3**) both held in Dubai in November 2023. With the theme of 'the Future of the Aviation Industry', the Dubai Airshow showcased the latest technologies and sustainable solutions from industry leaders across the globe in striving towards the sector's target of global net zero operations by 2050. The Airshow featured dedicated conference tracks on sustainability, including alternative propulsion systems, increasing efficiency of traditional engines and operating systems, hybrid and electric aircraft and sustainable aviation fuel (**SAF**) as well as forecasting topics for discussion at COP28.

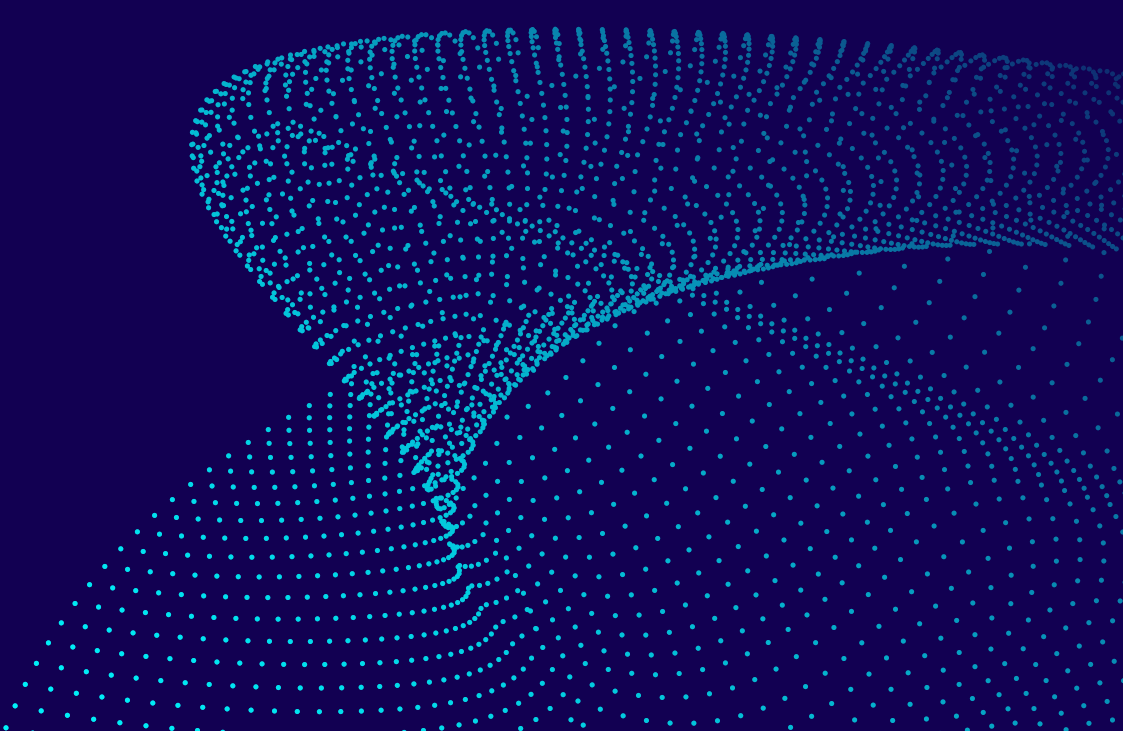


Advanced Air Mobility

Advanced Air Mobility (**AAM**) was provided an elevated platform at the Dubai Airshow with widespread industry recognition that this new and exciting arm of the aerospace sector could play a key role in reducing emissions and moving towards decarbonisation with cleaner operations. The dedicated 'Advanced Aerial Mobility Pavilion' at the airshow showcased the latest technologies and innovations in the AAM world and drew the attendance of key AAM institutions and personnel from government departments and regulators to electrical take-off and landing aircraft (**eVTOL**) and vertiport manufacturers and operators including Skyportz, VPorts, Kookiejar, Eve Air Mobility, Lilium, Archer, Joby and Volocopter among others.

Montreal based VPorts has initiated the certification process to launch its vertiports in Dubai and hopes to commence construction of its state-of-the-art infrastructure in the UAE in 2024. German manufacturer, Volocopter is already aiming to become the world's first commercial air taxi service at the 2024 Paris Olympics and working in collaboration with NEOM in its smart and sustainable regional development project to bring Urban Air Mobility (**UAM**) operations to the Kingdom of Saudi Arabia.

AAM also took centre stage at COP28 with Austrian sustainable mobility solutions provider, FlyNow Aviation displaying its prototype carbon neutral autonomous aircraft at the 'Science and Technology Hub' in the 'Sustainable Startups' section of the 'Green Zone'. Co-founder and COO, Yvonne Winter, speaking at the conference also confirmed they aim to launch a cargo version of the autonomous aircraft within the next 28 months.



Sustainable Aviation Fuel

In Dubai, the industry's carbon neutral 2050 targets is underpinned by the leadership's commitment to place the Emirate at the forefront of sustainable solutions through Dubai's own ambitions for a 40% cut in carbon emissions by 2023 and its 2050 Clean Energy and Net Zero Carbon Emissions Strategies.

Aviation is an important pillar of Dubai's economic strategy, and the Emirate continues to pioneer sustainable growth development efforts, adopt commitments and forge strategic partnerships in the sector. Most recently, Dubai-based Emirates Airline's operated the first flight of an Airbus A380 aircraft utilising 100% Sustainable Aviation Fuel as part of its US\$200 million Research and Development initiative.

In the UAE capital, Abu Dhabi Aviation, in collaboration with Italian manufacturer Leonardo, also conducted the first SAF fuelled helicopter flights in the UAE and MENA Region with Leonardo's AW319 aircraft.

"SAF" continues to be primary sustainability focus across the industry with manufacturers, operators and airlines utilising alternative fuel sources to power aircraft on test flights across the globe. Recent examples include Virgin Atlantic's world first 100% SAF fuelled transatlantic flight by a commercial airline from London to New York on one of its Boeing 787 aircraft and US based business jet manufacturer, Gulfstream Aerospace's own landmark 100% SAF transatlantic flight from its HQ in Savannah, Georgia to the UK's Farnborough Airport.

For context, SAF accounts for only 0.2% of total jet fuel consumption currently. However according to an IATA study in 2023, SAF volumes reached over 600 million litres (0.5Mt), double the 300 million litres (0.25 Mt) produced in 2022. In 2024, SAF production is expected to triple to 1.875 billion litres (1.5Mt), accounting for approximately 0.53% of aviation's fuel needs.

With lobbyists and protestors calling for carbon taxing on airlines and contributions to the newly formed 'Profit and Loss Fund' established during the first day of COP28 (designed to compensate vulnerable countries hit by the effect of climate change) SAF innovation and integration into global civil aviation operations remains one of the key considerations for the aviation sector with SAF estimated to have the potential to reduce aircraft carbon emissions by up to 85% over the fuel's life cycle compared to conventional jet fuel.

It is of no surprise therefore, that this topic formed the basis of many of the discussions, workshops, presentations and sessions between key players in the air transport sector During COP28. The Air Transport Action Group (**ATAG**) hosted representatives from the world's airlines, airports, air traffic management, civil aviation, energy and civil aerospace sectors for the COP28 'Global Sustainable Aviation Forum' on 6 December with SAF one of the primary topics of discussion along with technology and efficiency improvements and new and composite sustainable materials.

FINAL COMMENT

The aviation industry's focus on the COP28 conference represents the latest in a list of events hosted in the Middle East in recent months demonstrating the sector's commitment and vision towards a more sustainable future.

COP28 has raised awareness of the industry's responsibility to reduce its impact on the environment and explored methods to reach the collective goal of net zero carbon emissions by the mid-century through strategic partnerships and a unified approach between governments, finance and energy sectors, aviation experts and academic and research institutions to achieving these ambitious targets.

This coupled with the emerging technologies and innovations in the UAM, AAM and SAF industries highlights the industry's clear intention and the readiness to develop more sustainable solutions and to move into a new era of 'greener' operations. At the same time however, consumer and competition regulators maintain a watchful eye on any comments, representations and advertising claims the aviation sector makes as it cracks down on "green washing".

The aviation sector will continue to be the target of advocacy groups and regulators as it remains, on the one hand, heavily reliant on fossil fuels at least for the foreseeable future and on the other, an industry vital to driving economic growth and global connectivity. In May 2023, the French Government banned short-haul domestic flights where there is an option to travel by train. Whereas in contrast, the Dutch Government has recently abandoned its plans to reduce the number of flights at Schiphol Airport following objections from various countries including the United States, claiming the move would violate bilateral air service agreements and European law.

The aviation sector is one founded on innovation and has demonstrated time and again its ability to evolve and adapt to a changing world. The UAE has signalled its intent to be at the forefront of sustainability in aviation and the industry, as a whole is united in achieving its target of net zero emissions.



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