
# AVIATION'S PATH TO NET ZERO

**Katy Reid, Head of Sustainability & Corporate Responsibility, Menzies Aviation, explains why collaboration is key to reducing emissions.**

The use of electric GSE is dependent on airport infrastructure

The climate crisis is at a tipping point. Unless we take urgent action, the global carbon budget for 1.5°C will be unachievable. Currently responsible for 3% of global emissions of carbon dioxide, the aviation industry recognises the need to act now, and it is taking the necessary steps towards achieving the global target of zero carbon emissions by 2050. There are an increasing number of sector-wide initiatives being set up to hit that target, however, concerted, co-ordinated and collaborative industry action is critical to overcome the obstacles on the path to carbon neutrality.

## There are hurdles – but it is not mission impossible

There are significant challenges facing the aviation industry's path to net zero. The first is the high growth in demand for flying, particularly following the loosening of Covid-19 related travel restrictions. The aviation industry currently has an average growth rate of 3% a year, with this expected to continue to increase. This growth is, on the face of it, at odds with decarbonisation. Therefore, increased efficiency across the industry is essential to ensure emissions are reduced in the face of rising flight volumes.

To reduce emissions, airport infrastructure also needs to be fit for purpose. Key upgrades need to be made at airports to enable the widespread use of electric ground service equipment (GSE), including specified charging areas that are large enough to accommodate large fleets and are strategically located to minimise the travel distance from charging points to operations. This is key to aviation services providers like Menzies being able to upgrade their fleets to become fully electric.

This is complicated however, by recent global events that have seen the cost of electricity skyrocket, as well as the difficulties in electricity supplies being from renewable sources. With aviation services businesses increasingly choosing to invest in electric operated GSE there is a greater reliance on electricity, but this is only sustainable if electricity remains a viable energy source and is conducive to overall profitability. Looking longer term, accounting for the use of hydrogen powered engines, and other potential developments for GSE should also be considered, to ensure infrastructure will be able to accommodate further advancements moving forward.

In spite of this, perhaps the largest challenge is effective industry collaboration across all levels of the supply chain, to ensure that different businesses are able to work together to reach a common goal. Not only does this apply to infrastructure investment, but the sharing of technology and information which could have a positive impact on reducing emissions.

## Menzies is "All In"

Sustainability is a top priority for Menzies, as we continue to grow the business and look to find ways to improve our operational efficiency. Our sustainability programme, All In, was introduced across the business in 2021, and encapsulates Menzies' commitment to making a positive difference in a changing world for its people, communities and the planet.

Although we are not only focused on the environment, a key aim of that part of our programme is to achieve carbon neutrality by 2033, which coincides with the 200th anniversary of Menzies. In order to achieve this, we have devised three key approaches to reducing our environmental impact, which are: investing in equipment, energy efficient actions, and resetting our thinking. This is a goal we will continue to review and as we set science based targets for the short-, medium- and long-term.

Our initiatives and commitments cover all areas of our business including fuel services, cargo services and ground services.

Digitalisation plays a large role in our path to net zero. Having appointed a Senior Vice President Digital and Innovation, we have been transforming our operations, enabling efficiency, and reducing our carbon output. Across the business globally we have implemented our Go Paperless initiative, which analyses our paper use via monitoring software, and digitalises our processes and ways of sharing information with our teams internally.

Another example is the implementation of a telematics programme that has allowed us to monitor the efficiency of our vehicles and take steps to reduce any unnecessary engine idling. We are also in the process of moving our data centres to Microsoft over the next few months, which will make them carbon neutral.

"Perhaps the largest challenge is effective industry collaboration across the supply chain"

**Katy Reid,** Menzies Aviation

## Going green by going electric

While all areas of our business are being reassessed in light of our sustainability strategy and goals, it remains a fact that the vast majority of emissions for all aviation logistics businesses comes from GSE – accounting for 70-80% of overall emissions. There is already increasing investment into electric GSE equipment, with technological advancements meaning there are now more electric GSE available, including pushbacks, beltloaders, container loaders, baggage tractors and baggage carts.

Wherever possible, Menzies is investing in electric GSE, however this is dependent

Technological advances means more electric GSE is available

on available infrastructure at airports. Moreover, there is a significant cost associated with rolling out eco-friendly GSE as it is typically 30% more expensive than diesel or petrol-powered equipment.

Regionally, we have been able to complete several projects to trial the use of electric GSE, such as our Go Green project in Oslo. Established in 2018, it involved significant investment into electric ground support equipment to reduce our carbon footprint, whereby 90% of the ramp equipment had been replaced with modern, electric units by 2020. We are investing significantly once again this year in new electric GSE including 24 new pieces of equipment in Budapest alone, where the airport is implementing new infrastructure to support electric charging of the fleet, which will enable us to undertake fully electric turns at another location.

Elsewhere, in the United States, our close relationship with A&V Rebuilders, LEVCON, and HPEVS resulted in a partnership where we were supplied with lithium repower kits and refurbed beltloaders. This facilitated the refurbishment of our existing equipment, which has since been tested and approved for use. Not only does refurbishment negate the cost of purchasing new units, but it means that equipment is used for longer and not sent to the landfill.

Given the technical advancements resulting in reduced carbon dioxide output, easier maintenance and quicker charging, in the long run it would make commercial sense to modernise GSE fleets, making them entirely electric. However, it must be noted that there are external factors to consider, such as the energy source that will be used to charge the GSE equipment. This is determined by airports and governments. Nonetheless, with the potential for increased legislation and tax, it would be beneficial for stakeholders throughout the supply chain to take the lead on reducing the environmental impact of the aviation industry.

In the interim, hydrotreated vegetable oil (HVO) is a solution that is compatible with current GSE, and removes the cost associated with retrofitting. Produced from sustainable renewable feedstocks waste, HVO reduces net greenhouse gas emissions by up to 90% compared to regular diesel, however due to high demand and ensuring it is sustainably and responsibly sourced it is difficult to secure the fuel in the quantities needed to operate an entire fleet.

## No success without common standards

Practical solutions are at the heart of sustainability, however it is essential to track the performance of initiatives with quantitative KPIs, to ensure goals are verified, measurable and transparent. This is reflected by Menzies' decision to set science-based targets with the Business Ambition for 1.5°C campaign.

Aligning with recognised standards throughout the industry will provide increased transparency on how effectively companies are implementing their sustainability programmes and meeting their targets. We believe this is a positive step, benefitting the industry, throughout the supply chain, creating greater accountability.

## Calling for collaboration

The key to achieving carbon neutrality across the industry really is collaboration. Significant progress can only be achieved through cooperation at all levels, including airports, airlines and governments. With an increasing number of global initiatives, such as the UN Global Compact, and the Clean Skies for Tomorrow Coalition, there is significant progress being made through the industry working together.

Most recently, the Mission Possible Partnership's (MPP) Aviation Transition Strategy set out a global strategy to achieve net-zero aviation by 2050. Endorsed by over 60 aviation leaders globally, the report sets out actions that must be taken over the next decade to deliver the goals of the Paris Agreement. Actions include drastically improving the fuel efficiency gains of the aircraft, the rapid roll-out of sustainable aviation fuel and market entry of hydrogen, battery-electric or hybrid powered aircraft.

The key milestone of the strategy revolves around the increased commercialisation of SAF, which it notes is "the decisive task to achieve carbon-neutral growth by 2030 and to lay the foundation for net-zero aviation by 2050". In addition to this target, the MPP lays out that there must be $40-50 billion of annual investment into SAF production plants and airport and upstream infrastructure, such as retrofitting buildings with renewable electricity generation capacity.

As the first aviation services business to sign the global strategy, Menzies is uniquely placed to lead initiatives at that level of the supply chain, ensuring that fuels, cargo and ground services are taken into account when planning future strategy.

Furthermore, the widespread support of global initiatives will ensure that there are standardised benchmarks for businesses across markets, which will in turn facilitate the implementation of more sustainable operations.

## The way forward

We are confident that our commitment to go "All In" reflects the importance we place across all areas of ESG, particularly in respect to climate change, operating and growing sustainably. In recognition of the serious threat of climate change, there has been significant action taken within the aviation industry to create a pathway to carbon neutrality and zero emissions. However, it is vital that there is collaboration, accountability, investment and engagement across all levels of the aviation industry if we are to ultimately achieve the ambitious goals set. ***ghi***