

Industry Weekly Digest

School of Hospitality & Tourism Management

Airports' Hero is Net-Zero

Whilst airport operations are responsible for just 5% of air transport sector emissions, there are still significant ways in which airports and their users can reduce emissions and contribute their part to addressing climate issues within the aviation sector.

In this digest, **Dr Nadine Itani**, Lecturer in Air Transport Management and Joint Programme Leader for **MSc Air Transport Management**, explores this topic.

Have a great Weekend!



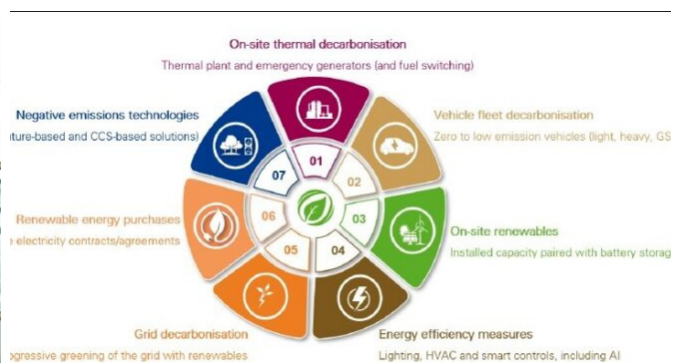
Airport operators do not have control over aircraft emissions at the airport and its vicinity, as these are operated by airlines

Dr Nadine Itani

Despite being used interchangeably, the concept of 'net zero carbon emissions' is different from the term of 'carbon neutrality'. Carbon neutrality requires reducing emissions as much as possible and then compensating the remaining ones by offsetting. In other words, purchasing carbon credits by investing in emission reductions in other sectors. While, the net zero concept does not allow for offsetting, it requires emission reductions down to zero and the removal of any residual emissions from the atmosphere is done either naturally (forestation), or technologically (carbon capture).

What emissions are we discussing and how can they be addressed?

International aviation organisations namely [ICAO](#) and [ACI](#) are engaging airports worldwide to eliminate their carbon footprint at the latest by 2050. As of last year, 238 airports in Europe have already committed to this target, with nearly 100 of them pledging to achieve net zero by 2030. Since more than 92% of the emissions are aircraft related, therefore the emissions from aircraft operations are not included in the Airports' Net-Zero commitment.



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Airports are the interface of a complex network of aircraft movements, technical operations and surface access transport. Being heavy consumers of energy, on average an airport consumes 9.7 kilowatt-hours (kWh) of electricity and 34.7 kBtu of natural gas per square foot, annually. Energy therefore accounts for a large part of airport operating costs (up to 15%), creating a financial incentive for airports to source energy that is both cheaper and greener.

Among the ways available for airports to address their emissions are better insulation and energy efficiency, switching to green energy sources for electricity, heating, cooling, and investing in hybrid, electric or alternative fuelled service vehicles and support equipment. In this context, the transition to a clean energy system is a key enabler for airports to reach net zero.

Swedavia, the Swedish Airports company, is the first worldwide to achieve Net Zero emissions at all its ten airports since 2019. From back-up airport generators to a fleet of 800 vehicles, all elements of Swedavia's network of airports are now powered by renewable energy, eliminating 8,000 tons of fossil carbon dioxide a year.