The path to decarbonising aviation
The aviation industry is in a period of transformation as passengers and Brussels regulators increasingly demand more sustainable air travel. A mixture of measures are on the table to cut emissions, from ramping up sustainable aviation fuels to greening airports and plotting more efficient routes.

In this event report, EURACTIV hears from EU legislators and those at the forefront of the aviation industry as they chart a path towards cleaner flying.
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As public opinion turns against polluting industries and lawmakers mull increasingly punitive green taxes, shifting to low-carbon flying will safeguard the economic success of the aviation sector, Rome's airport chief has said.

Marco Troncone, the CEO of Aeroporti di Roma, said that the sector must be realistic about its decarbonisation goals, managing expectations in the short term and showing a concrete plan for decarbonisation in the coming years.

"We cannot risk being criticised by public opinion. Some flight-shaming trends are already in place. We cannot be subject to restrictive or punishing policies made up of punitive taxation. This is the risk we have to avoid," he said.

While the level of aviation emissions is low when taken on a global scale, this should not be an alibi for inaction, according to Troncone.

The airport chief was speaking at a roundtable on Tuesday (24 January) highlighting the “Pact for the decarbonisation of air transport”, which gathers aviation industry players to chart a path to decarbonise the Italian aviation sector by 2050.
The event was held in the European Parliament and hosted by Italian MEP Marco Campomenosi.

The climate impact of flying, responsible for around 3% of global emissions, has seen the growth of the “flight-shaming” movement, and spurred the French government to introduce a ban on some domestic flights on climate grounds – developments that have set alarm bells ringing in the aviation sector.

The carbon intensity of aviation also puts the sector at risk of being excluded from the EU’s green taxonomy list, which provides guidance on sustainable investment options, potentially harming private capital funding flows.

Troncone said that as global focus moves from ensuring energy security in the wake of Russia’s invasion of Ukraine back to climate change, the aviation sector could find itself in a “very vulnerable, very dangerous situation”.

By openly communicating the journey towards reducing emissions, the backlash against the industry will be avoided, ensuring aviation can maintain its reputation as an important source of global connectivity, he added.

The sector should be honest that emissions may rise in the next few years, Troncone said, as demand rebounds in the wake of COVID and carbon-cutting measures such as green jet fuels and clean flight technology are yet to be introduced at scale.

However, an increase in sustainable aviation fuels (SAF), the shift to renewable energy at airports, and greater route efficiency will see aviation emissions fall significantly in the medium to long term.

Speaking at the event, Henrik Hololei, the director-general of the EU’s transport ministry, echoed the urgent need for the aviation sector to clean its operations.

“Aviation simply cannot continue with business as usual. I think everyone agrees with that. Aviation has to become far more sustainable,” he said.

“I would never say that there should be less aviation, but what I would say is, the more we have aviation, the more sustainable this aviation has to be,” he added.

Despite the challenges, Filip Cornelis, aviation director with the European Commission, was positive that there is a greater alignment between the goals of citizens, the political level, and the aviation industry than in the past.

“Ten years ago in the aviation sector many were saying ‘we cannot reduce our emissions, others have to do it, it’s just not possible for technical reasons’. This has now completely changed,” he said.

“The whole industry has come together to embrace the need for change,” he added.

Oliver Jankovic, the director general of ACI Europe, a trade association representing airports, portrayed decarbonisation as a matter of industrial survival.

“There won’t be any recovery, long-term, for the sector, if we don’t decarbonise at the same time,” he said.

“If you ask any European airport, it is very clear that for us this is no longer just about our licence to grow in the future, but very simply our licence to keep operating,” he added.

However, Jankovic branded the French government’s decision to ban domestic flights where a short train journey was possible “ridiculous”, arguing that these routes will be the first to decarbonise.

He praised EU policymakers for setting a three-year time limit on the ban, by which time SAFs will be available in greater quantities.

Thomas Reynaert, managing director of Airlines for Europe (A4E), similarly accused politicians of making a “political gesture” with the flight ban, which is “actually not going to do anything about reducing CO₂ emissions”.

These measures will reduce airlines revenue, making it more difficult to invest in decarbonisation, he argued.

“Airlines have been accused of some greenwashing... But I would argue that some of the governments are probably also greenwashing, by proposing and implementing knee jerk policies that actually do very little to improve sustainability or have very little impact on emissions,” said Reynaert.

However Rayenaert said that when it came to the green transition for airlines “regulation or no regulation, there is no way back”.

“We need to serve the customer, and customers want to fly green.”
A realistic pathway to cut aviation emissions is the best way the sector can prevent lawmakers from restricting flying on environmental grounds, the head of Rome’s Fiumicino and Ciampino airports has said.

As the impacts of climate change increase in frequency and intensity, the willingness of lawmakers to give polluting industries a pass will wane, Marco Troncone, the CEO of Aeroporti di Roma, told EURACTIV.

Continuing a business-as-usual approach would therefore be “very dangerous, in terms of negative restrictions and punitive policies” according to Troncone.

“Chances are high that in five years time, the level of attention [on polluting industries] will be higher than exists now. And at that time there will be zero tolerance,” he said.

“If there is tolerance it will only be given in exchange for a promise [to cut emissions], which must be credible,” he added.

Rather than waiting for regulators to force change, Italian aviation stakeholders banded together to create a road map for the decarbonisation of the aviation sector, one that sets out a realistic pathway to reduce the sector’s carbon footprint.

The “Pact for the Decarbonisation of Air Transport” aimed to move away from the “slogans and groundless intentions” of the past, showing regulators achievable steps to reach a greener aviation sector – steps which rely on proven
methods rather than speculative technological fixes in the future.

“The ultimate objective [of the Pact] was to provide a convincing, credible, and effective answer to the question of how the aviation industry will get out of this problem before it’s too late,” Troncone explained.

**Financing decarbonisation**

The path towards decarbonisation is expected to be costly, as cleaner fuels are currently several times more expensive than their fossil equivalent.

According to Troncone, this will likely mean that passengers will need to pay more to fly, as airlines attempt to shoulder green charges while remaining profitable.

However, if ticket prices surge and demand falls too greatly, many players in the industry could find themselves struggling to stay afloat.

Hence, public subsidies should be used to ensure that passenger numbers do not collapse, giving aviation players time to transition to a green way of operating, Troncone believes.

“What we would like to see is a public intervention to complement the contribution of operators and of customers, allowing us to reach a certain level of scale,” he said.

As for EU regulations, Troncone said he would prefer to see a greater emphasis on incentives, rather than mandates.

Under the ReFuelEU regulation, airlines would be required to partly refuel with synthetic fuels and biofuels made from approved feedstocks.

The airport head questioned the feasibility of the EU's green jet fuel law, which is currently being debated by member states and MEPs.

“Those mandates do not have, at least to my knowledge, a very solid grounding in terms of execution capability from the sector,” he said.

“There is some research that says that the blending mandate in the medium term – up to 15, 20, 30 percent from biological sources – would simply be impossible because of feedstock constraints.”

“We think those are mandates whose destiny is not to be met in actual fact,” he added.

It is expected that demand for sustainable aviation fuels in the coming years will be satisfied with biofuels from feedstocks such as used-cooking oil, before transitioning primarily to hydrogen-derived synthetic fuels in the future.

**Hydrogen planes**

Beyond replacing kerosene with green jet fuels, new clean technologies, such as hydrogen-powered jets and electric planes, are touted as a means to cut the sector’s climate impact.

European plane manufacturer Airbus is currently testing hydrogen propulsion technology, with the aim of bringing hydrogen planes into commercial service by 2035.

However, Troncone is not convinced that these much-hyped technological solutions offer the answer to reducing the aviation sector’s emissions.

“In our view, at least today – and this is part of the credibility effort we want to make – the actual potential of hydrogen for aircraft is yet to be proved. It's not a matter of 'when', we think it's an issue of ‘if,” he said.

Asked if Roman airports are preparing for the infrastructural changes that these new technologies will require – such as new fuelling and recharging facilities – Troncone said that there is a wait-and-see approach.

“When it comes to aircraft, there are a number of issues which suggest that there are chances that we will never see, at least a long haul flight, solely fueled by hydrogen.”

As for electric planes, Troncone believes they will be limited to covering very short distances for the next decades: “We think [electric] will never be the one to allow long haul journeys, like from London to San Francisco, which are the flights that in the end cover the lion’s share of emissions.”

If in 2025 Airbus confirms its 2035 timeline for hydrogen jets, Rome's airports will start to invest in the necessary upgrades, Troncone promised.

“I'm pretty positive that 10 years will be a more than sufficient time for us to get equipped and ready for that, but we’ll start on this when we are sure that there is a potential,” he said.

“If not, we tend to not even speak about it, because this is only confusing and the time in which people will get fed up of listening to dreams is coming.”