



Electric Air Travel for Real – Interview with Olav Mosvold Larsen

MANAGER CARBON REDUCTION PROGRAMME, AVINOR, OSLO, NORWAY

Electric air travel still sounds a bit science-fiction. Is it realistic?

Yes, it is indeed possible to fly electric aircrafts, we've already bought one. We've been flying it for several months. It's a small aircraft though, it has two seats, a 20 kWh battery and a range of 130 kilometres. The range is quite impressive though, I know people who drive a car might not be so impressed with 130 kilometres, but keep in mind the shortest commercial flight in Norway, regular route, is only 32 kilometres. We have more than 20 routes that are shorter than 180 kilometres, so even with today's technology it's possible to fly electric between our airports.

What is the timeline for the first regular electric flights in Norway?

Somewhere between five and ten years. And we see now that many of the aircraft producers and also the aircraft engine producers are getting highly involved in electrification. Airbus and Boeing, Pratt & Whitney, Rolls Royce, you name it, they are all in the game and we expect to see electrified aircrafts in aviation in Norway within a decade.

Could domestic flights become 100% electric in the future?

Our target is that by 2040, all domestic air travel should be electrified, that means, it will be very close to zero emissions and when we say electrified that means we could perhaps have some kind of hybrid solution, where you can recharge the aircraft when you're in cruise mode for instance.

How big is the potential for carbon dioxide savings?

There's a high share of domestic air traffic in Norway, short haul flights. About 1.1 million tons of CO₂ are emitted annually in domestic air travel and 1.5-1.6 million tons in international travel. So if we succeed in electrifying domestic travel by 2040 we will reduce our emissions by 1.1 million tons or approximately two percent of Norwegian emissions.

What challenges do you see for electric airtravel?

The main challenge now is the energy to weight ratio of the batteries – batteries are still heavy. That's why many companies are working on hybrid electric solutions. They will have a battery, but also a sort of turbo generator or something similar, which charges the battery as you fly when you need extra range. But for the very short haul flights in Norway you can fly fully electric already. We expect this to take off when the batteries get better and lighter.

And what about international long haul flights?

It will probably take decades until you can fly electric or hybrid-electric on intercontinental flights. So to be able to reduce carbon emissions from international flights, at least for the longer flights you will be dependent on energy efficient initiatives at the aircrafts themselves. We also require an huge amount of sustainable aviation biofuels. That will be the solution for long haul flights in Norway and in many other countries throughout the world.

Watch full length video interview: <https://bit.ly/2viv4Be>