ELECTRIC AVIATION NORWAY



Photo: Ørjan Arntsen





What is an electric aircraft?

Battery Technology

Range – What distance can an electric aircraft fly?

Infrastructure

Timeline



What is an electric aircraft?



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Battery technology development - Scenario 2020 - 2040



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Electric aircraft - Reduced noise

Elimination of fuel burning combustion – potential significant reduced noise levels





Electric aircraft – New design opportunities - Short runway capabilities

Electric engines may be designed to deliver short power boost to increase acceleration and reduce take off distance.

The scalability of electric engines opens for entirely new designs of aerodynamics and propulsion.



Transition to electric aircraft – Range extender!



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Electric aircraft - Specific energy consumption

Specific energy consumption comparison (kWh/pax km)



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Energy consumption Bodø – Sandnessjøen. Flight distance 190 km



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Infrastructure – PSO network of airports



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Similar infrastructure for car ferries



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Timeline fixed wing. Scenario 2018 - 2040



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Electric propulsion is suitable for regional flight routes in Norway and more than 20 short destinations/routes can soon be operated by new electric aircraft.

The first commercial flights are expected to be hybrid electric in order to accommodate the mandatory energy reserve for such operations.

Norway is well-positioned to be a pioneer in this field because of clean renewable hydropower and a well-structured network of short field airports owned by Avinor.

The government subsidy program (PSO) is one of several instruments that can be structured to encourage operation of electric aircraft

