GREEN TURNAROUND AT TORINO AIRPORT, 
CO₂ EMISSIONS REDUCED TO ZERO
NEW STEP OF THE 'TORINO GREEN AIRPORT' PROJECT 
FOR INCREASINGLY SUSTAINABLE AIR TRANSPORT

The airport has new electrical vehicles and procedures to carry out 
aircraft handling operations with reduced environmental impact

*Caselle Torinese, September, 20 2022 – Aircraft turnaround* at Torino airport becomes 100% green. With an *electrically powered fleet and airport procedures aimed at increasing sustainably*, Torino airport is *reducing the environmental impact of aircraft ground handling operations*, with the positive effect of *eliminating CO₂ emissions* for a better airport experience.

Torino airport thus adds an element to the sustainable initiatives put in place as part of the *Torino Green Airport* project and seeks to anticipate the achievement of *NetZero 2050 targets* before 2050 deadline, as well as fulfilling the commitment of the *Toulouse Declaration* for an increasingly sustainable air transport industry.

Turnaround (i.e. the set of aircraft ground handling operations required between flights), involves several activities, each one handled through specific procedures carried on with different vehicles.

The electric fleet available at Torino airport and operated by SAGAT Handling, the company that handles ground services and controlled by SAGAT, includes several vehicles:

- **baggage tractors**: useful for underboard approach of vehicles requiring towing;
- **GPU-Ground Power Units**: mobile generator for powering the aircraft and their equipments when the engines are off;
- **passenger stairs**: stairs for the descent/ascent of passengers from/to the aircraft;
- **baggage belts**: for loading/unloading baggage embarked in the hold;
- **ambulifts**: lifting platform for boarding/disembarking passengers with reduced mobility;
- **towbarless aircraft tractors or pushbacks**: useful for pushing the aircraft in reverse to exit the parking.

Carrying out a turnaround with electric vehicles allows several advantages, first of all from an environmental point of view: *about 100 kilograms of CO₂* deriving from the use of conventional diesel-powered vehicles is not released. With the current availability of green vehicles, the reduced impact of CO₂ emitted per day is *more than 1 tonne*.

To make some examples, the average fuel consumption of traditional vehicles and the respective amount of CO₂ emitted are given below:

- a traditional diesel-powered baggage tractor results in the use of 1.70 kg of fuel, equivalent to 5.4 kg of CO₂ released;
- a traditional diesel-powered GPU results in the use of 14.5 kg of fuel, equivalent to 46 kg of CO₂ released;
- a traditional diesel-powered baggage belt results in the use of 10.5 kg of fuel, or 33.3 kg of CO₂ released.

This amount of CO₂ emitted is totally reduced to zero thanks to the use of *electric vehicles*, which at Torino airport are *powered by 100% certified renewable energy source*. 

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Torino airport has also expanded the number of parking aprons where passengers can be boarded by walk-in/walk-out procedures, thus avoiding the use of diesel-powered buses (1.66 kg of fuel, equivalent to 5.3 kg of CO₂ emitted).

The renewal of the airport fleet is a process that has been underway for several years, and the goal is to have at least 40 percent of hybrid or full-electric powered vehicles by 2023.

The existing fleet will also be joined by an electric minivan dedicated to executive services in General Aviation and soon by an electric ambulance to carry out the medical service in the apron.

**Andrea Andorno, CEO of Torino airport** commented: “Aware that the sustainability of our operations must drive the development of the airport, we are proud to be able to offer airlines that choose our airport a zero-impact turnaround, thanks to the investments we have made on the continuous renewal of our fleet with electric vehicles and the purchase of 100% electricity from certified renewable sources”.

At this link [https://vimeo.com/753891873](https://vimeo.com/753891873) you can download the video infographic of the green turnaround at Torino airport.