

## Investments

In 2019, the ATM group made investments of around Euro 155.4 million, of which Euro 133.5 million are destined for the renewal of the fleet, including General Overhaul and Revamping of the metro and trams.

As part of the framework agreement with Hitachi Rail Italy for the supply of Leonardo trains, it was completed the supply of 6 trains for the M1 metro line in accordance to the application of the third contract. The last 4 trains delivered in 2019 are added to the 2 trains already delivered in 2018.

Within the aforementioned framework agreement, in the year 2019 there were carried out the deliveries of the first 4 trains corresponding to the application of the fourth contract, which involves the supply of a total of 12 trains destined to the line M2. The trains will enter into service consistently with the times set by the complete renewal project of the M2 metro line which, among other things, provides for the adoption of a new signaling system. In fact, during 2019, after the final project was completed, the tender for the award of the contract relating to the new signaling was announced; the awarding of the contract will take place in the first months of 2020 and according to the time schedule the new system will start operating in 2025. The complete remaking of the signaling, fully financed by ministerial contributions and by the Municipality of Milan, will ensure safer and more efficient service management, allowing trains to reach a frequency of up to 90 seconds, instead of the current 120/150 seconds, thus allowing a 30% increase in transportation capacity, from 40,000 to 52,000 passengers transported per hour. In close association with the intervention on the signaling systems, it will be necessary to carry out the timely refurbishment of the equipment system. The interventions will have the objective of arranging sections of line in which the equipment has undergone a deterioration in performance of the mechanical components or was made with technical solutions that do not allow the expected increase from 70 km/h to 85 km/h of running speed.

With reference to surface vehicles, the bus fleet renewal program continued in 2019, as part of the projects aimed at the gradual replacement of all diesel vehicles with hybrid and full electric buses. With this project ATM openly declares its ecological mission, which will lead it to be a carbon free company, whose carbon dioxide emissions will be zero and in case they are incompressible, they will be eliminated thanks to the planting of

new trees in the city.

The "Full Electric Bus" project for the city of Milan constitutes the backbone of the financial proposal project called "Milano Next", presented in May 2019 to the grantors of the Basin Agency and the Municipality of Milan, by a consortium of companies, with ATM having the leading role. The proposal relates to the implementation of infrastructural interventions and investments in the mobility sector, including: the supply of 12 and 18 meter electric vehicles, the construction of four new depots, the conversion of three existing depots, the equipping of the above with charging columns, installation of charging implants at the terminals and new maintenance equipment. The proposal is being examined by the Bodies that will have to assess its public interest which, in the event of a favorable assessment, will be the subject of the tender procedure pursuant to art. 183, paragraph 15, of Legislative Decree 50/2016 (please refer to the paragraph "*Going concern and contractual framework*" for further information regarding the Milano Next project).

In the transition from diesel to full electric, given the impossibility of electric bus manufacturers to satisfy such a large purchase request, we will continue with the inclusion of hybrid buses which, compared to traditional vehicles, allow significant reductions in both fuel consumption and CO<sub>2</sub> emissions.

Currently in urban areas, the bus fleet that uses the ATM Group is made of approximately 87.1% diesel vehicles, since from 2018 ATM has no longer contracted the purchase of traditional diesel vehicles. In 2020 the target will be a fleet made of 60% diesel, 25% hybrid and about 15% full electric vehicles. In 2028 the target will be a 100% sustainable fleet, 80% made up of full electric vehicles and 20% of hybrids, to proceed in the immediate future towards the 100% full electric transformation. The goal is to have around 1,200 electric vehicles in circulation at full capacity, for the establishment of a Zero Emission Zone extended to the suburbs; in specific, there will be a lower consumption of diesel estimated at about 30 million liters per year and a reduction of polluting emissions of CO<sub>2</sub> of about 75,000 tons per year.

Taking into account that the "Full Electric Bus" project will absorb a significant amount of energy, ATM has signed a contract for the supply of electricity produced from renewable resources, certified Green Energy with a Guarantee of Origin. Consequently, the electric

vehicles will be completely supplied with sustainable energy.

In February 2019, the delivery of 12-meter full electric buses was completed, as per the framework agreement signed in 2017 for the supply of 25 vehicles, including the full maintenance service for five years, for a total amount of 15.3 million euros. The 25 electric vehicles are all in service together with the respective charging systems installed at the San Donato depot.

In July 2019, was also awarded the tender for the framework agreement for the supply of 250 full electric buses for a total value of 210.8 million euros, with a first application contract for 40 buses, which also includes full service maintenance for the entire life of the vehicle and the supply of traction batteries, which will replace those installed at the first system, since their performance is expected to deteriorate at about half the life of the vehicle.

The delivery of the first 40 vehicles is expected by July 2020. The stipulation of the second application contract is also being finalized, which foresees the supply of 100 buses with enhanced battery, whose delivery will be between autumn 2020 and the first months of 2021.

With the introduction of the full electric bus transport service, the so-called "dressing" of the service, that is the assignment of vehicles to the exit tables for the year, will also have to be reviewed and perfected. As compared to the what was established for years regarding the diesel vehicles, the operation of the new vehicles will have to be modulated in relation to the new requirements related to the autonomy of the batteries and the possibility of use of online charging stations; in this sense, a first, small, remodeling has already been carried out, to adapt the use of the 25 electric buses of the San Donato depot. In fact, following the installation in 2018, of the charging systems at the San Donato depot for the first 25 electric buses, during 2019 was announced the tender for the installation of the charging stations at the terminus and in the three depots, which, according to the Full Electric plan, will be subject to conversion. The contract was awarded in early 2020 and contracted in February 2020.

In the transition from diesel to full electric, given the impossibility of electric bus manufacturers to satisfy such a large purchase request, the introduction of hybrid buses will continue. As part of the framework agreement with Iveco for the supply of 120 hybrid 18-meter buses, in July 2019 was finalized the delivery of the last vehicles.

On October 2018, was also formalized an agreement for the

supply of 25 12-meter hybrid buses, including full maintenance service extended to the entire life of the vehicle, for an amount of 15.14 million euros; This to take advantage of the opportunity of a ministerial financing subject to the acquisition of vehicles through the CONSIP convention, 24 vehicles were delivered in 2019, while the last one in January 2020. At the initial supply of 25 buses, through a negotiated procedure, there were further added 4 other 12-meter hybrid buses, also delivered in 2019, due to the accrual of penalties from previous supply contracts.

At the beginning of 2020, the public tender for the signing of a framework agreement relating the supply of 150 hybrid buses of 12 meters, with a full maintenance service extended to the entire life of the vehicle, was re-launched for a total amount of 72 million euros. The same tender had already been banned at the beginning of 2019 but was canceled due to the limited participation and the high price of the vehicles offered, unjustifiably misaligned with the market forecasts and standards.

Regarding the renewal of the bus fleet of the subsidiary NET, during the year was completed the renewal plan of the related bus fleet with the acquisition of 44 cars for a total investment value of Euro 12 million, of which 7 were acquired from self-financing and 5 million were contributed by the Lombardy Region. In particular, in 2019, 22 buses were delivered and entered into service, of which 21 buses for the suburban Lotto 3 service and 1 bus for the urban service of Monza. In December 2019, the last 7 buses for the Monza urban service were delivered, registered and put into service in January 2020. It should be mentioned that 15 cars had already entered into service in 2018, 9 of which for the suburban service Lot 3 and 6 for the Monza urban service.

In total, 44 buses were purchased and delivered in the two-year period 2018-2019, of which 14 of 18 meters and 16 of 12 meters for the interurban service Lot 3 and 14 of 12 meters for the urban service of Monza. The investment has made it possible to renew 32% of the subsidiary's fleet of vehicles, introducing new generation vehicles, equipped with every comfort, having a lowered or high floor but in any case equipped with a lift for wheelchair access.

Continuing on the subject of electric mobility, on July 2019 a tender was awarded for a framework agreement relating the supply of 80 two-way trams with a length of 25 meters, having a lowered platform only in the area of the access doors, to be used on the urban and long-distance network, with an expected delivery starting from about 24 months since the signing of the

first application contract of 30 vehicles. Against the award, one of the companies participating in the tender filed an appeal with the TAR. This appeal was rejected with a very clear ruling in favor of the work of the tender commission. An appeal by the same company is now pending for the same reasons before the Council of State.

During 2019, the first 19 trolley buses of the 30 belonging to the first application contract were delivered, within the framework agreement for the supply of 80 vehicles, for a value of over 61 million euros. The delivery of the first 30 vehicles will be completed by 2020, while the remaining 50 are expected by 2022. These are 18-meter articulated vehicles, which will replace all the older 12 and 18-meter vehicles, rejuvenating the trolleybus fleet up to an average age of 4 years.

It should be noted that the new trams and new trolley buses arriving will offer customers a better quality of service, in terms of comfort and accessibility; they will be updated to the most modern safety requirements and they will guarantee greater energy savings, compared to the old ones, thanks to the braking energy recovery system, the anti-collision system for trams, to the mitigation of the noise emitted in the environment, to the provision of technological systems that allow customer network connectivity once on board.

Again in the context of the renewal of the vehicle fleet and with a view towards sustainability, was completed the project for the replacement of 83 diesel service cars with electric rental ones, to be used for assistance to the on-line vehicles and to the control of the operation and maintenance of the metropolitan and tramway systems.

Further deliveries of 21 electric rental cars are expected in 2020.

Regarding the works on the plants, should be highlighted the project to upgrade the M2 underground line, co-financed by the State to 60%, which saw ATM take over from the Municipality of Milan to finance the remaining portion: the modernization of the

traction and power implants is planned, especially in the open sections from Gobba farm to Gessate, which will be completed with interventions aimed at breaking down architectural barriers on the underground.

In June 2019, the first phase of the renewal of the electric traction and power supply systems of the M2 line section was completed, mainly referring to the former fast lines of the Adda from C.na Gobba to Gessate.

In November 2019, it was delivered the second phase of the works, (mainly concerning the section of the line from C.na Gobba to the terminus of Cologno Nord), works that will be activated in 2020 and will end in 2021.

In addition, ATM is the leader in the ticketing revolution in Local Public Transport.

The digital transformation of Milan's public transport is today at a turning point in the context of ticketing methods. ATM is the first company in Italy and among the top ten in the world to offer its customers the opportunity to travel by metro by accessing directly with contactless payment cards enabled with EMV technology, without additional commissions, thanks to the collaboration of the Mastercard and Visa partners.

The contactless system in Milan, which started on the metro network in June 2018, represents a fundamental step in the digital transformation that ATM is conducting to further increase the level of service offered and to improve the travel experience of passengers, making at the same time, its operating processes more efficient. The next step will be to extend the project to the surface vehicles and to the correspondent car parks.

In 2019 the Danish subsidiary Metro Service A / S supported investments in computers, furnishings and to the replacement of diesel service cars with electric ones. At the moment 10 electric cars have been put into service.