ISET – MOBILITY DIVISION

FOUR YEARS IN HYUNDAI IONIQ EV 2019 28 KWH

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1. PREMISE

This information booklet contains the real data collected by ISET in the use of a Hyundai Ioniq EV 28 kWh Model Year 2019 in Puglia for four years.
The car was purchased at the Auto Caracciolo dealership in Brindisi and registered on 18/01/2019.

These data were compared with those recorded by the same driver with his previous car, a Lancia Delta 1.6 Mjt Euro 5. The data are comparable because the destinations and driving style, being the same, had no significant influence on them. Furthermore, the data analysis was carried out over a period of time coinciding with exactly four years (the first four years of the car's life), so that the climatic conditions, which can be very varied during the months of the year and which have a significant influence on the consumption of electric cars, did not frustrate the objectivity of the analysis carried out. Indeed, we believe that a single day's instrumental road test of an electric car is not exhaustive, as it does not test the car in all conditions.
You should do at least 4 trials a year and average the results; we did better, collecting data for four whole years.

The main use of the car is the commute from home to work, with some extra excursions at the weekend. With both diesel and electric cars, efforts have been made to obtain the lowest consumption, for the same travel time. For this reason, main extra-urban roads with a speed limit of 110 km/h were preferred for the diesel engine, while a shorter route was chosen, also characterized by passage through urban centers and secondary extra-urban roads with a speed limit of 90 km/h, for the electric drive. The percentages of the types of route for both vehicles are shown below.

ROUTE TYPE	HYUNDAI IONIQ EV 28 kWh	LANCIA DELTA 1.6 Mjt Euro 5
Main suburban roads	29%	84%
Secondary extra-urban roads	67%	15%
City route	4%	1%

Table 1 - Types of route adopted in the main use

2. PURPOSE

The purpose of the proposed study is to provide reliable data on the running costs of one of the best electric cars produced so far, if not the best for general efficiency, compared to those of a modern Euro 5 diesel car. At the basis of this comparison, there is the search for the minimum cost. Therefore, in both cases, the driving style was oriented towards obtaining the best mileage and the most convenient solution from an economic point of view was always sought for all cost items.

Considering that there are many differences between one electric car and another (much greater than the differences that can be appreciated between two different diesel cars, for example), it is recommended to use the data reported only if an electric car is considered

of the same model or at least with the same technology (other cars in the Hyundai range adopt a technologically similar power pack).

3. CONSUMPTION AND PERFORMANCE

In four years, 14,525.18 kWh were needed to travel 132,199 km. From this cumulative figure it is possible to calculate an average consumption of 9.10 km/kWh. In reality, according to what was detected by the on-board computer, the Hyundai Ioniq EV traveled on average 11.67 km with one kWh. Why this difference? During recharging, not all of the energy withdrawn is stored in the battery.

Figure 1 - Average consumption measured by cdb at 88,427 km

The so-called "charging efficiency" is calculated from the ratio between the stored energy and the one withdrawn and depends mainly on the quality of the charger. In the case of the Hyundai Ioniq EV under review, the average charging efficiency over the first four years was 77.9%. Considering that the efficiency of an electric car is around 90%, the overall efficiency of the system is around 70%.

The value is stratospheric. For comparison, the efficiency of the Lancia Delta 1.6 Mjt, at a constant speed of 100 km/h, is equal to 35.6% (consider that this is an excellent value for a car with an internal combustion engine, because there are also cars with an efficiency of less than 30%). It must also be considered that the condition of constant speed at 100 km/h is an ideal condition for a diesel car. In reality, in real use, the average efficiency always settles at values much lower than 30%. This means that less than 30% of the calorific value of the fuel is converted into r
The electric car is more than twice as efficient.

But even compared to other electric cars, the value is considerable: in some cases (ISET has been testing electric cars for many years) we have recorded recharging efficiencies just above 70%, which correspond to overall efficiencies of around 6

The following table summarizes the above results, year by year, and calculates the average theoretical autonomy, i.e. the one that could be reached if all the battery capacity were used. Therefore, this figure depends on the state of health *(SOH - State Of Health)* of the battery over time, given that it is affected by a physiological degradation of the same, which can be easily quantified through an electronic diagnosis. However, it must also be emphasized that this value refers to the nominal capacity of the battery (in the case of the Hyundai Ioniq EV in question it corresponds to 28 kWh) and not to the real capacity, which is slightly higher than the declared one. A value of 100% will therefore be read as long as the nominal capacity of 28 kWh is still available, although battery degradation begins to occ

YEAR	Km travelled	kWh taken	Real average consumption [km/kWh]	Average consumption measured by on-board computer [km/kWh]	SOH	Average autonomy [km]
1	35.885	4211,70	8,52	10,7	100%	300
2	28.615	3242,34	8,82	11,4	100%	319
3	38.640	4190,02	9,22	12,1	100%	339
4	29.059	2881,12	10,09	12,8	100%	354
FIRST 4 YEARS	132.199	14525,18	9,10	11,67	100%	323

Table 2 - Average distances traveled and consumption in the first four years

From the data reported in Table 2, an important and progressive decrease in consumption is evident, which corresponds to a significant increase in autonomy. Let's analyze the reasons for this phenomenon, which turns out to be very interesting, above all considering that a reduction of autonomy is expected over time and n

First, regeneration under braking can greatly influence the performance of an electric car. However, it is not certain that you will be able to make the most of its potential from day one, especially if you come from driving a car with an internal combustion engine, which does not have this device. An expert electric guide, therefore, is the first element that causes this pleasant phenomenon. We also include many other elements within this heading, such as for example the attention to always have the right tire pressure, as well as that of not carrying unnecessary objects on board the car, which would increase the weight.

Furthermore, as happens in all cars, the friction of the mechanical parts is reduced over time, as they settle down. In the second year, thanks to expert driving and adjustment of the mechanical parts, consumption improved by 3.5%. While the settling partly explains the reduction in fuel consumption in the second and third years, however, it is unlikely that it had an equally significant effect in the fourth year, given that the car had already covered an impressive 103,140 km.

Among the elements acquired and worthy of being highlighted, we have identified a third cause of the reduction in consumption: the replacement of tyres, which took place at 73,079 km. The original equipment consisted of very smooth Michelin Energy Saver, a tire with a low friction coefficient, a feature that significantly affects fuel consumption. In the meantime, however, the same manufacturer has developed a new tire inspired by the Energy Saver model, with the aim of further increasing its smoothness: thus the e.Primacy model was born. It was necessary to replace the fantastic Energy Savers with tires that had the same construction philosophy, so the choice fell on this brand new model. Even if the first 8579 km of the third year were covered with the same tires as the previous years, the difference was such as to allow for a further improvement in consumption in the third year, quantifiable in a good 4.5%. In the fourth year, the same set of tires was always used for all the kilometers travelled.

Now, we will continue to monitor consumption and check how it will evolve even in the vehicle's fifth year of use. A further but very limited improvement is expected, considering that by now the same tires will be used throughout the year, that expert driving has now been acquired and that the friction of the mechanical parts could still decrease only slightly. Among other things, the values found are truly impressive and it is difficult to imagine further significant improvements.

For the sake of completeness, a comparison is also provided with the average consumption recorded, for both the electric and diesel cars in question, in the respective Quattroruote road tests, which are very severe and aim to test the car intensively. The test approach proposed by ISET, innovative as always, was to test the vehicles in compliance with environmental sustainability and in the name of economy of use, fundamental and indispensable corporate values, projected towards the goal of improving the world that surrounds us. This approach has led to driving oriented towards the pursuit of minimum consumption and maximum efficiency: the savings on consumption compared to the certified Quattroruote road test, which can be appreciated in the following table, is equal to 33% for the electric car and 37% in the case of

TYPE OF CONSUMPTION	HYUNDAI IONIQ EV	LANCIA DELTA 1.6 Mjt Euro 5
Average consumption detected by ISET	9.10 km/kWh	22.5 km/l
Average consumption measured in the Quattroruote road test	6.1 km/kWh	14.1km/l
Consumption measured in the road test Four wheels in the city	6.9 km/kWh	10.4 km/l
Consumption measured in the road test Quattroruote on a state route	6.7 km/kWh	18.5 km/l
Consumption measured in the road test Four-wheelers on a motorway route	4.8 km/kWh	13.5km/l

Table 3 - Consumption

With these consumptions, the Hyundai Ioniq EV has guaranteed average ranges that are always in excess of 300 km, which is a lot for an electric car with a battery of just 28 kWh (see photograph in Figure 2). Just think that the next model, the Hyundai Ioniq EV model year 2020, has a 38 kWh battery: with these consumptions it would guarantee at least 400 km of autonomy.

We have noticed a singular peculiarity: strangely, the on-board computer has never displayed a residual range of more than 300 km, not even with a 100% charged battery, although often (especially with favorable weather conditions, especially in spring and autumn) have exceeded 300 km on a single charge. We realized that it is a limitation set at the software level, probably designed not to delude the driver that more than 300 km could be covered.

Figure 2 - Residual autonomy with 100% charge

We report below, in the image in Figure 3, the photograph of the summary that is displayed as soon as the car is switched off after a move. In the summary photographed, which refers to a journey in favorable climatic conditions, 66 km were traveled with an average consumption of 14.0 km/kWh and at the end of the journey the on-board computer still calculated a residual range of 272 km. Therefore, also considering the 66 km travelled, a range of 338 km can be deduced.

Figure 3 - Summary of a journey in favorable climatic conditions

4. TOP UP

The average recharging power was 2.43 kW. Considering that the on-board battery charger allows you to recharge up to 6.6 kW1, it is decidedly low power, within the reach of any user. The recharges were mainly carried out at night with the recharging device supplied with the car (MODE 2) or via *wallbox* (MODE 3). The power with which you have chosen to charge the car is so low precisely because it is at night

[1] The 2020 version of the Hyundai Ioniq EV features an even more powerful 7.2 kW charger.

they have many hours available, so it was not necessary to use more power. Furthermore, a *fast* recharge **(MODE 4) has never been performed. This choice, deeply desired, tends to preserve the battery, because such recharges accelerate its degradation.**

Now let's see where the energy used for recharging comes from:

- **70.49% of the energy was taken from the national electricity grid at an average cost of €0.237/ kWh (considering not only the cost of a single kWh, but all the costs included in the**
- **bill, including fixed costs); 25.23% of the energy was taken from the domestic photovoltaic system at a cost of €0.050/ kWh2;**
- **3.41% of the energy was drawn in MODE 3 from charging stations managed by the Sagelio company at an average cost of €0.179/ kWh (also powered by renewable**
- **sources); 0.16% was withdrawn in MODE 3 from public columns at an average**
- **cost of €0.445/ kWh; 0.04% was taken from free columns located in shopping centres.**

The following table shows a summary of the total costs incurred and the cost per kilometer incurred for energy in the first four years (equal to just 2 euro cents).

WAY OF REFILL	SOURCE ENERGY	kWh TAKEN	AVERAGE COST [€/ kWh]	TOTAL COST [€]
MODO 2 o WAY 3	USER HOUSEKEEPER	10.264,03	0,237	2.381,19
	PHOTOVOLTAIC DOMESTIC	3.674,49	0,050	183,72
WAY 3	SMALL COLUMNS SAGELIO	496,03	0,179	57,24
	SMALL COLUMNS PUBLIC	23,31	0,445	10,37
	SMALL COLUMNS FREE	67,32	0,000	0,00
SUM OF COSTS FOR 132,199 km (TOTAL COST IN THE FIRST 4 YEARS)				2632,52
KILOMETRIC COST [€/ km]				0,0199

Table 4 - Cost of energy

[2] In reality, it is not a question of a cost, but of the lost profit resulting from the introduction of that energy into the grid.

5. OTHER MANAGEMENT COSTS

The other car management costs are: road tax;

-
- RCA insurance;
- ordinary maintenance.

CAR TAX. In Puglia, the payment of the tax for electric cars is exempt for the first 5 years (see figure 4). From the 6th year onwards, 25% of the amount due is paid, obtained by multiplying the approved power figure shown in field "P.2" of the vehicle registration document (in kW) by 2.58 (which is the cost in € for each kW of power). The Hyundai Ioniq EV has 25.3 kW of nominal power, therefore from the 6th year onwards the road tax will cost around €18.00 (including ACI collection costs). The road tax of the Lancia Delta 1.6 Mjt costs €229.00.

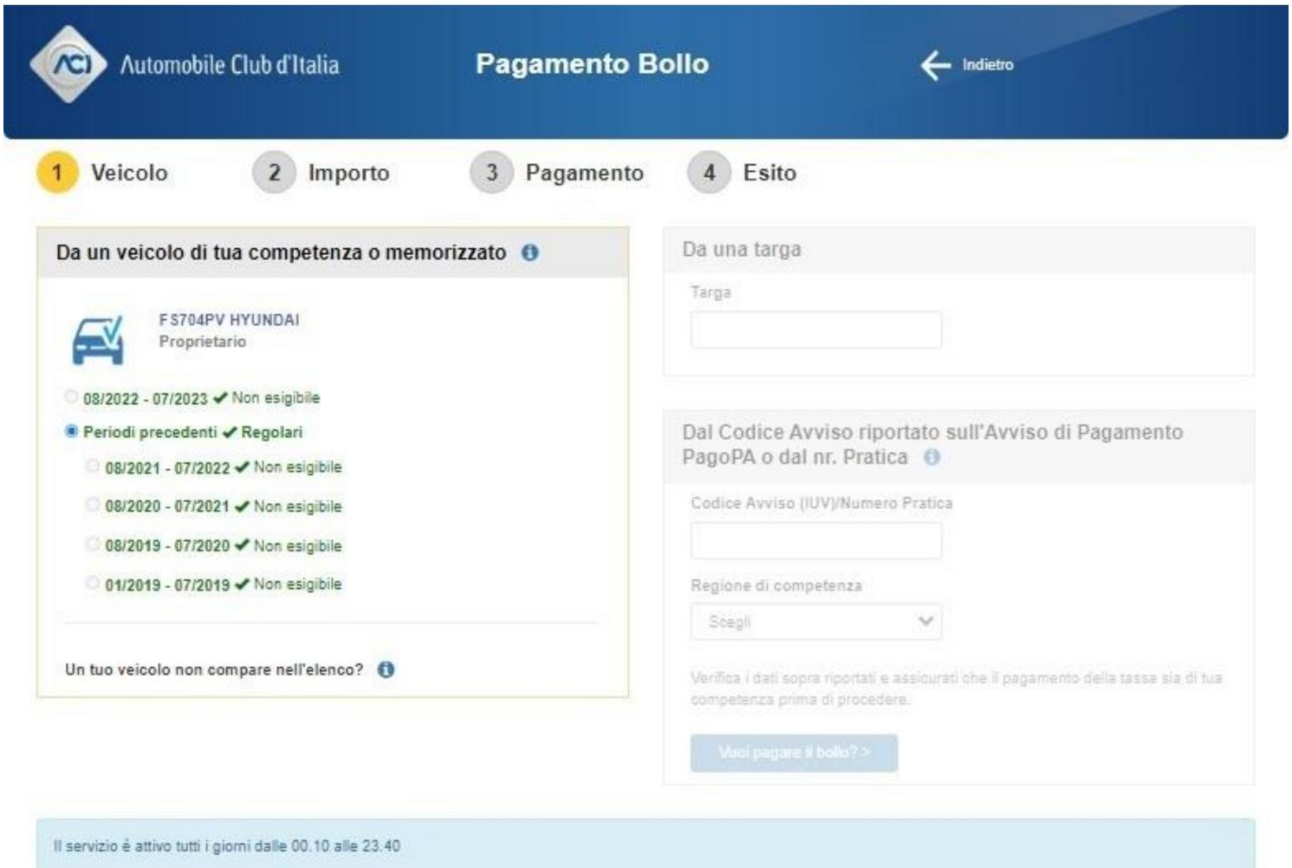

Figure 4 - Screenshot from the ACI site

RCA INSURANCE. The annual RCA insurance of the Hyundai Ioniq EV cost €330.00 for the first year, €303.00 for the second year, €210.00 for the third and fourth year[3]. An average cost of €263.25[4] is deduced. As for the Lancia Delta, equal

[3] In the first and second year with the UnipolSai insurance company, the third and fourth year with Generali.
[4] This average cost is destined to further decrease, because in the 5th year the cost of the RCA was equal to € 200.00 with Allianz insurance company.

of driver, class of merit, historicity of the certificate of risk and conditions, the RCA cost € 835.00 for the last two years of use of the car and it would have cost € 478.00 with *low cost online* **insurance.**

ORDINARY MAINTENANCE. In 4 years, 4 coupons were carried out, costing € 72.00 (on 12/30/2019), € 115.00 (on 12/23/2020), € 103.00 (on 09/13/2021) and €100.08 (on 09/14/2022). An average annual cost of €97.52 is deducted for routine maintenance.
On the diesel car in comparison, the coupons were performed annually and the average cost was €450.00.

6. SUMMARY OF COSTS

The following table shows the comparison of the average running costs for one year (with an average distance traveled of 33,050 km per year).

AVERAGE ANNUAL COSTS	HYUNDAI IONIQ EV	LANCIA DELTA 1.6 Mjt Euro 5
ENERGY/FUEL	€ 658,14	€ 2172,485
STAMP	€ 0,006	€ 229,00
RCA INSURANCE	€ 263,257	€ 478,00
MAINTENANCE	€ 97,52	€ 450,00
TOTAL	€ 1018,91	€ 3329,48

Table 5 - Summary of annual management costs

With the electric car, therefore, an average of €2,310.57 was saved per year. Since the car is expected to be kept for at least 10 years, an estimate of running costs over 10 years and 330,500 km traveled is proposed below.

COSTS IN 10 YEARS	HYUNDAI IONIQ EV	LANCIA DELTA 1.6 Mjt Euro 5
ENERGY/FUEL	€ 6.581,40	€ 21.724,80
STAMP	€ 90,00	€ 2.290,00
RCA INSURANCE	€ 2.632,50	€ 4.780,00
MAINTENANCE	€ 975,20	€ 4.500,008
TOTAL	€ 10.279,10	€ 33.294,80

Table 6 - Summary of management costs for 10 years

[5] Average diesel cost: 1.479 €/ l.
[6] Exempted for 5 years, from the 6th year onwards it becomes €18.00.
[7] Calculated from the average premiums paid over the last four years.
[8] Three replacements of the distribution kit, two replacements of the brake pads and one replacement of the brake pads were considered brake discs.

Considering a 10-year period, the electric car therefore saves €23,015.70. In reality, over time, the advantage will increase more due to the lower probability of an extraordinary maintenance intervention, for example due to a breakdown, on the electric car. Since this is much simpler from a constructive point of view, in fact, greater reliability is expected.

7. POLLUTION

In this chapter we intend to calculate how much is polluted by the electric car to travel 132,199 km and we want to compare this figure with the pollution emitted by the usual reference diesel car.

THE ELECTRIC CAR. Electricity does not materialize at the outlet, but is produced and distributed through the national electricity grid. In Italy, to produce one kWh 397 g of **CO2eq are emitted into the atmosphere 9. Considering that a total of 14525.18 kWh were withdrawn and that 28.64% of these were generated from renewable sources, in three years with the electric cars 4.11 tonnes of CO2 were emitted to**

THE DIESEL CAR. Since the fuel does not materialize at the distributor, just as the energy does not materialize at the outlet, we must also consider the pollution caused by the production of fuels. Considering a mileage of 22.5 km/l (that obtained driving a diesel car), 5875 liters of fuel would have been consumed in 132,199 km, which corresponds to 5.87 tons of CO2 (to produce a liter of fuel, an average of one kg of CO2). To this value, we must add the exhaust emissions of the car: considering the 130 g/km declared (the declared figure is never real, but we consider it as such to make a conservative estimate), they make 17.18 tons of CO2 . In all, again to travel 132,199 km, diesel cars emit 23.05 tonnes of CO2, i.e. more than 5 times the emissions of an electric car (5.61 times more to be precise).

Without even considering that during the regeneration of the particulate filter the diesel car pollutes more (up to 10 times) and taking the declared polluting emissions for granted (which is anything but sure), in just four years with the electric car already 18.94 tons of CO2 are avoided. The most amazing thing is that this result was possible using the domestic photovoltaic system for only 25.23% of the total energy withdrawn. By drawing a higher percentage of energy from the photovoltaic system, at least another ton of CO2 can be avoided each year, considering an average annual distance of 33,050 km.

Even the production of energy distributed on the grid is converting towards cleaner sources and the contribution of renewable sources is growing: just think that already in 2020, for the first time ever, renewable sources overtook gas natural (which is a fossil fuel and therefore a non-renewable source). Italy is one of the most virtuous European nations, thanks to its geographical position and the incredible variability of the national territory, which naturally supplies the following ren

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[9] Data source: Elaborated by the GSE for the calculation of the value of the emission factor relating to the electricity supplied to electric traction road vehicles (to be adopted for the purposes of the annual communication to the GSE referred to in article 7bis, paragraph 2, of the legislative decree March 21, 2005, n. 66) updated to 2016.

- water;
- wind;
- sole;
- underground;
- biomass.

Table 7 below shows the data representative of the evolution of the energy mix used for the production of energy sold by Enel Energia (the leading national supplier) from 2012 to 2021[10] .

PRIMARY SOURCES	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021[11]
Renewables	30,7%	38,2%	43,1%	40,8%	38,8%	36,4%	40,8%	41,7%	46,6%	45,8%
Carbon	18,9%	18,9%	19,0%	19,4%	15,5%	13,7%	12,3%	7,9%	6,8%	7,7%
Natural gas	39,1%	33,1%	28,6%	30,6%	38,0%	42,6%	39,2%	43,2%	36,5%	38,4%
Petroleum products	1,3%	1,0%	1,0%	1,3%	0,8%	0,8%	0,5%	0,5%	0,6%	0,8%
Nuclear	4,2%	4,2%	4,6%	4,8%	3,8%	3,6%	4,1%	3,5%	5,6%	4,2%
Other	5,8%	4,6%	3,7%	3,0%	3,1%	2,9%	3,0%	3,1%	3,9%	3,1%

Table 7 - Evolution of the national energy mix from 2012 to 2021

THE LIFE CYCLE. The analysis carried out so far leaves open a very topical question: does an electric car really pollute less than a diesel car over its entire life cycle? We will try to provide an answer, based on the information available on the *carbon footprint* (literally translated: carbon footprint) of production processes in the *automotive sector.*

First of all, let's clarify what are the main pollution items that occur throughout the life cycle of a car[12]:

- vehicle production emissions; emissions
- for the production of fuel or energy;
- tailpipe emissions;
- emissions due to wear of the braking system;
- vehicle maintenance emissions; emissions
- for vehicle disposal.

EMISSIONS FOR VEHICLE PRODUCTION. Producing an electric car has a greater environmental impact, especially for battery production. But this impact only needs to be counted once, because it only affects vehicle production.

[10] Data taken from the bills for the supply of electricity of the user used for domestic recharging.
[11] Pre-final data.
[12] In reality, there are also other items of pollution, such as the wear and replacement of tyres. As the contribution of this item is similar for all cars, it is omitted for simplification.

Over the entire life cycle of an automobile, this impact, as we will see in the summary below, is not significant.

EMISSIONS FOR THE PRODUCTION OF FUEL/ENERGY. We have already reported the quantification of this item at the beginning of this chapter.

EXHAUST EMISSIONS. We have already reported the quantification of this item at the beginning of this chapter.

EMISSIONS DUE TO WEAR OF THE BRAKING SYSTEM. As far as braking system wear is concerned, the electric car has a huge advantage: regenerative braking. Where other cars are forced to dissipate energy to brake, the electric car instead reuses part of that energy to recharge the battery, and does so with "regenerative" braking. In this way, the traditional braking system is not involved, which will wear less, will last much longer, but above all will not generate fine particles due to wear of the pads (it has been demonstrated that they make up a third of the fine particles present in urban pollution).

EMISSIONS FOR VEHICLE MAINTENANCE. Even in maintenance there is no doubt: with each coupon, the electric car saves at least 4 to 6 liters of used lubricant, an oil filter, a fuel filter, an engine air filter. They are special waste that must be disposed of directly in landfills. Service, however, is routine maintenance. In reality, a car with an internal combustion engine always has extraordinary maintenance interventions: in addition to the braking system, which we have already talked about, there are other components that wear out and which may need to be replaced in the first 10 years. of use. Among these, there are the clutch, the water pump, the fuel pump, the electro-injectors, the turbine, the starter motor, the probes for the control of the exhaust emissions, the air flow meter, and many others. Obviously, every time one of these components is replaced, further pollution is caused by their disposal.

EMISSIONS FOR VEHICLE DISPOSAL. It is difficult to quantify this last item, but some irrefutable considerations can be made. Considering that the chassis, suspension, braking system, interior, glass, headlights and many other components are common between electric cars and cars with internal combustion engines, let's focus on what differs from each other, i.e. the engine . When a car equipped with an internal combustion engine is disposed of, many mechanical components of the engine are worn out and therefore not reusable. Furthermore, there will be a lot of hazardous waste, as there is a high quantity of chemicals (for example, lubricants and fuels) and many components are contaminated by them (for example, oil filters, diesel filters and all the mechanical parts that are lubricated or belonging to the supply circuit, such as electro-injectors). Obviously, the environmental impact of a waste with these characteristics is certainly very high. As far as the electric car is concerned, however, the electric motor is reusable as it does not show significant wear and, in any case, most of its components can be recycled a
Even the battery can be completely disassembled and 99% of the materials that compose it can be recovered. Although specialized centers for recycling electric car components are not yet widespread today, it is undeniable that the latter is suited to a circular economy model, unlike the traditional car.

SUMMARY OF EMISSIONS. The following table shows the estimated values for each of these items (at least those that can be calculated, excluding those deriving from extraordinary maintenance or vehicle malfunction) in tonnes of CO2 equivalent for 10 years and considering a distance traveled of 330,500 km.

CO2 EMISSIONS [tons]	HYUNDAI IONIQ EV	LANCIA DELTA 1.6 Mjt Euro 5
VEHICLE PRODUCTION	8,800	5,600
FUEL PRODUCTION O ENERGY	10,277	14,689
AT THE UNLOADING	0	42,965
BRAKING SYSTEM WEAR	0,020	0,050
MAINTENANCE	0,010	0,150
DISPOSAL	to calculate	to calculate
TOTAL	19,107	63,454

Table 8 - Polluting emissions relating to the entire life cycle in equivalent tons of CO2

From the data collected, neglecting the "disposal" item (which we will take care to calculate in the next revisions of this information booklet and which will in any case be another item in favor of the electric car), we deduce that in 10 years and 330,500 km traveled the Hyundai The Ioniq EV object of the study pollutes less than a third compared to the Lancia Delta 1.6 Multijet Euro 5, and precisely 44.3 tonnes of CO2 less.

8. CONCLUSIONS

From this direct experience, the clear superiority of the electric car can be perceived. In addition to the unparalleled driving pleasure, the performance, the silence (it will also reduce noise pollution in urban centres), the better weight distribution, the low center of gravity (the battery is located under the floor), the aerodynamics (favored by the absence of large radiator groups in the engine hood), the economic and environmental benefits are also incredible. We close this issue with a general summary of the data processed in the proposed epoch-making comparison (see next page).

ESTIMATED COSTS IN 10 YEARS OF USE (330,500 km)

Hyundai IONIQ EV		Lancia Delta 1.6 Mjt Euro 5
		
4,470 mm		4,520 mm
Comfort	VERSION	Gold
88 kW / 120 CV	POWER	88 kW / 120 CV
295Nm always	MAX TORQUE	320 Nm a 1500 giri/min
9,5 sec	ACCELERATION 0 - 100 km/h	11,1 sec
31,5 sec (161,7 km/h)	1 KM FROM FERMO (OUTPUT SPEED)	32,8 sec (157,2 km/h)
8,9 sec	REPRESS 70-120 Km/h	18,2 sec
165.790 km/h	FULL SPEED	194.878 km/h
1563 kg	PASTA	1622 kg
52% ant. - 48% post.	WEIGHT DISTRIBUTION	62% ant. 38% post.
€ 30.800,00	PURCHASE COST	€ 25.000,00
€ 2.632,50	RC AUTO	€ 4.780,00
€ 90,00	STAMP	€ 2.290,00
€ 6.581,40	ENERGY/FUEL	€ 21.724,80
€ 975,20	COUPONS	€ 4.500,00
€ 0,00	BRAKE PADS/DISCS	€ 390,00
€ 1.600,00	TIRES	€ 1.920,00
€ 42,679.10	AL 10 YEARS AND 330,500 km € 60,214.80	
5 YEARS / UNLIMITED KM	WARRANTY	2 YEARS / UNLIMITED KM
19,107 ton	CO2 EQUIVALENT EMISSIONS IN THE LIFE CYCLE	63,454 ton
0	CO2 EMITTED AT THE EXHAUST	44,694 ton
0	PARTICULATE IN THE EXHAUST	27.200 g
0	NOX AT THE EXHAUST	12.500 g

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