WHY EV?
2025

APRIL 23, 2025

Ather Rizta Z

Authored by: Sandeep A K

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Why I went for EV?

1. I live in first floor and have made a charging set-up in my parking slot. Also, we do have free charging point at office.
2. Daily commute distance is around 15km and for a week its around 120km (approximately).

EV Model	Range	Charging frequency	Units for one full charge	Rate for 1 unit of electricity (BESCOM)
Ather Rizta Z **(2. 9kWh)**	100km	2 times per week	3.22units (Refer Page 4)	10Rs (Approximately)

Expense for one full charging	One-week expense
30.22Rs	60.44Rs

Note: - In addition, I am planning to re-charge once a week from office and once from home.

Summary- To commute 200Km a week, by a normal petrol scooter, will consume around 5 liters of petrol (considering mileage is 40Km). The expense per week will come around 510Rs. The same will cost me 61Rs for EV i.e. one eighth of petrol bike.

Frequently asked questions/ Misconceptions

1. Battery technology and EV infrastructure is not advanced. Hence, it's not time for EVs yet
2. No re-sale value for EV vehicle

3. Battery will get damaged after few years and replacing the same will cost almost half the vehicle cost

Answer

I get 8 years of battery warranty from the company and hence for 8 years the running cost will be as below:

EV – Electric Vehicle

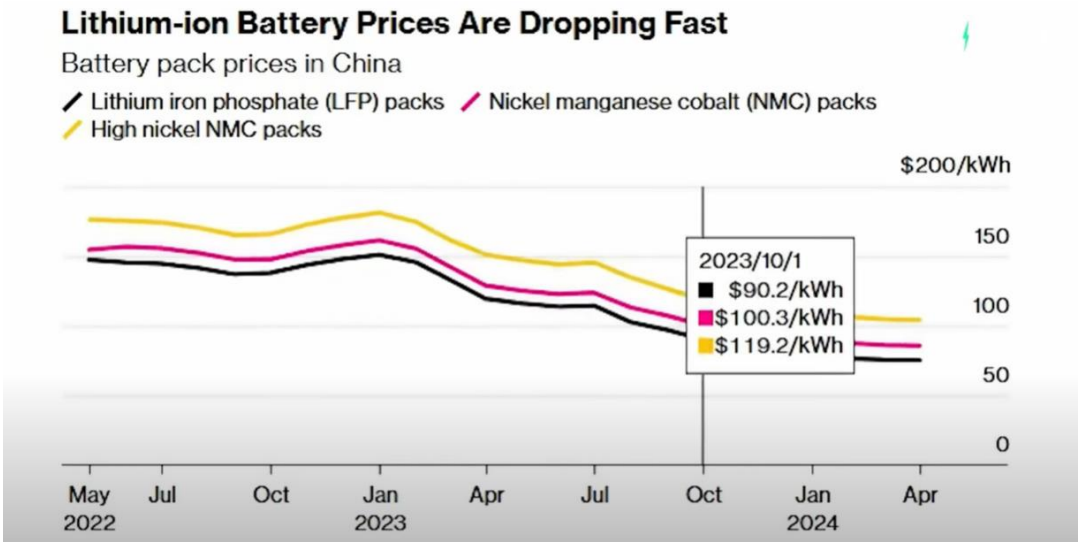
PV – Petrol Vehicle

Fuel Cost	per week	Per Month	Per Year	For 8Years
EV	60Rs	240Rs	2880Rs	23,040Rs
PV	500Rs	2000Rs	24,000Rs	1,92,000Rs

So, if I run the vehicle for around 8 years the net profit will be 1,68,960Rs just for fuel, which is more than the cost of another EV. The **question 2** about re-sale is not valid as we can buy a new vehicle instead with this profit.

Note: In addition, I get profit for other vehicle maintenance like oil change etc... For EV, we need to replace only belt after every 20,000KM or 3years and its cost is negligible.

The price for battery is being reduced at a faster rate. The below is the graph of the same for Ola vehicle battery. The same is applicable for all EV battery.



The battery price has dropped to half the value in last few years (Source).

So, replacing the battery after warranty period (8years) will not cost much considering this trend to follow for next 8 years. So, I believe the **question 3 is answered**.

The EV infrastructure is being developed at a faster rate in India (Source Google). Whereas there are indications that petroleum industry is declining in India and across the globe as the crude oil price tends to remain all-time low. This is because the world is increasingly moving towards renewable energy sources. So, in near future the petrol vehicle may loose the market against modern EVs. This is clearly visible in the industry as no R&D or new innovations are happening in the petrol vehicles whereas the EV industry is growing at an exponential rate n=in terms of new technologies and innovations. The EV sales is increasing at 25% every year. Currently we do have a subsidy for the EV but this may end soon. So this is the right time to buy an EV. Hope this **answers the question 1**.

> ***"It often requires more courage to dare to do right than to fear to do wrong." - Abraham Lincoln***

Battery Consumption Calculation

In BESCOM (Bangalore Electricity Supply Company), 1 unit of electricity = 1 kWh. To determine how many units are required to fully recharge the Rizta Z with a 2.9 kWh battery, we use the below calculation, accounting for charging efficiency.

1. Battery Capacity: 2.9 kWh
2. Charging Efficiency: 90% (0.9)
3. Electricity Consumed:

$$\text{Electricity Consumed} = \frac{2.9\,\text{kWh}}{0.9} \approx 3.22\,\text{kWh}$$

Since 1 kWh = 1 unit, the total units required to fully recharge the Rizta Z would be approximately 3.22 units in BESCOM.