

Electra EV sets goal to be a global player

The low-profile EV solutions company first wants to establish itself in India as a supplier to more than just Tata Motors. Sumantra B Barooah reports on the company's plans for "exponential" growth.

It was in September 2017 that Tata Motors, which didn't have a single electric vehicle (EV) in its stable then, sprang a surprise by bagging an order from Energy Efficiency Services Ltd, to supply EVs. Partner to this achievement was an entity called Electra EV. The powertrain of the winning model, Tigor EV, comes from Electra EV, a firm backed by Ratan Tata.

Around 2,000 units of Electra EV-powered vehicles have been sold so far. Not a big number, but neither is the share of electric cars in the Indian EV industry yet. In a market, which grew by 20 percent in 2019-20 to 156,000 EVs (excluding three-wheelers), only 3,400 were electric cars. Industry players bet that the market is set to grow further, with 2020-21 possibly being an inflection period. A good part of the optimism is also fuelled by the cleaner, clearer environment during the ongoing pandemic-led lockdown.

Electra EV eyes "exponential" growth in the next few years. The company clocked a turnover of around Rs 115 crore during the last financial year. Its target is to touch the Rs 1,000-crore mark in three years or so, failing which Samir Yajnik, Electra EV's executive director, says he will be "surprised". That's because, he says, "We have the solutions, we have the optimisation capability, we are investing (in R&D,



Electra EV looks to enter the EV charging infrastructure space too, in India and overseas.

build various capabilities)". Yajnik cites three pillars – optimisation, design and development, and charging infrastructure – on which Electra EV's overall growth strategies are based on.

Electra EV's first project was the Neo EV, in other words the battery EV version of the Tata Nano. It was supposed to be built by Coimbatore-based firm Jayem Automotives. That project faced hurdles as India adopted new safety regulations which the vehicle wasn't engineered to meet. There's still a possibility for the Neo to be

The Tigor EV's powertrain was optimised to increase driving range from 140 to 213 kilometres in a single charge.





Tata Motors chairman emeritus Ratan Tata flags off the Tigor EV on December 6, 2017. Tata Ace EV among new projects by Electra.

introduced in favourable markets which do not have any regulatory hurdles.

In contrast to the 48V system developed first for the Neo, Electra EV now wants to develop and provide 350V systems for PVs like the market favourite SUV, as they need more 'juice', in terms of performance and driving range. It offers four voltage options – 48, 72, 96, and 110. "All of them are applicable to four-wheelers but also applicable to quadricycles. The 48V is also applicable to three-wheelers," says Yajnik. So, the approach is to "optimise it, make it more energy efficient, more sound-free, and enhance range." This was done with the Tigor EV powertrain. In October last year, an 'extended-range Tigor EV' with the powertrain tweaked to deliver a claimed driving range of 213km in a single charge rolled out. That's around 52 percent more than the first Tigor EV.

Alliances for growth

As the global electrification megatrend gains traction, the strategy of collaboration is becoming almost a necessity. Electra has struck an alliance with a Swiss EV charging infrastructure firm, Green Motion.

What started as a relationship to help the foreign player understand India is now set to power Electra EV's global ambitions too. Green Motion has 22kW and 44kW AC, DC EV chargers, and also a 3.3kW personal charger option. "We will add more value to it to make it far more efficient and usable in India first, and then also globally," reveals Yajnik.

The local EV solutions supplier has also joined hands with academia and some firms to design and develop new motor and battery solutions. As the EV industry evolves, Electra EV, also one of Ratan Tata's "favourites", looks to script a much bigger story. ■



Tata Motors' MD Guenter Butschek and EESL's Saurabh Kumar with the Tigor EV. Fleet operators key for the EV industry growth.

INTERVIEW SAMIR YAJNIK, EXECUTIVE DIRECTOR, ELECTRA EV

What will it take for the share of electric cars to grow in the overall Indian EV industry's sales pie? Industry figures for FY2020 show it at a very low level of 2-3 percent. What do you think can be a realistic growth expectation by say 2025?

Globally, EV sales have risen in the last decade. However, the Covid-19 pandemic will slow down the gains. The Indian auto industry was already going through a difficult period and the pandemic has been a huge setback for all segments. Leaving out the e-rickshaw segment, which is largely in the unorganised sector, the FY2020 sales numbers for EVs in India show 20 percent year-on-year growth at 156,000 units. This number is less than one percent of total auto sales in FY2020. However, I agree with the estimates the total EV sales could touch 5 percent in the next few years.

By 2025, we should work towards enabling at least 50 percent of that. As a nascent industry, we could see a fillip caused by adoption of disruptive battery technology for a substantial price drop, indigenously designed and manufactured EV propulsion systems and the build-up of a more robust domestic supply chain with some assistance from additional demand-side incentives.

In the four-wheeler EV industry, a real game-changer could be an Indian small or city car that is not only successful and has volumes in India but can have acceptance and numbers on a global scale.

How significant a play will it be for Electra EV



'I hope we see the FAME II scheme being extended and expanded beyond 2022.'

overseas? Which are the regions that look promising for you to tap?

At present, our focus is the Indian EV market. We provide relevant and affordable EV powertrain solutions, systems and services to support OEMs, orchestrators and Tier 1 suppliers, attempting to accelerate the future of electric mobility. We do this through developing and adapting electric powertrain technologies and by utilising a systems approach. Once these products have been proven robust and reliable in difficult tropical conditions in India, we will be ready to establish a global footprint, starting with markets with similar climatic conditions.

As a specialist company in the EV powertrain market, we are continuously innovating to build our core strengths in powertrain optimisation and energy utilisation for range and torque requirements in real-use case scenarios.

A large part of the development we are involved in today is centred around validating our solutions in these conditions. We are also plugged in as industry partners of research consortia, working on various battery chemistries for range and

life extension.

Should the FAME II policy be extended beyond 2022, or tweaked?

FAME II is a well-thought-out extension of FAME I. The FAME II scheme touches upon all segments of the mobility space – two-wheelers, three-wheelers, cars and buses and includes the charging infrastructure – and is based on the battery size with conditions on Phased Manufacturing Program (PMP). Depending on the consumption of FAME II, which will be clearer in 12 months, I hope we see the FAME II scheme being extended and expanded beyond 2022.

The personal mobility segment may merit greater push due to growing customer preference for the same based on the trends after the onset of Covid-19. Companies that make progress on the phase-wise indigenisation could also be beneficiaries of greater incentives. A stage-wise report card, based on the depth of PMP success, can be considered as well. While most of the FAME II incentives are in place for the supply side, demand-side incentives can also be considered if the scheme is extended.