FROM THE CEO’S DESK

Dear Friends,

The 27th issue of EV Connect, our monthly electric mobility focussed newsletter, highlights our talk with Mr. Goldie Srivastava, co-founder and CEO of SmartE (India’s first and largest electric mobility service provider). Apart from discussing current challenges and solutions to accelerate electric vehicle (EV) adoption in India, Mr Srivastava also stresses on the need for skilled workforce and how government initiatives can help enhance skill development in the EV sector.

Along with our regular news updates, from national and global frontiers, we have a special feature on attractive subsidies offered by Indian states to push EV manufacturers and buyers towards EV adoption. Various developments are taking place in the the electric mobility, and it is often difficult to keep up with them. We hope this curated and compiled newsletter will come in handy to those who are seeking the latest information on electric mobility.

We hope you find this edition beneficial and share your thoughts so that we can improve further.

Sincerely,

Dr. OP Agarwal
CEO, WRI India

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In Conversation with Goldie Srivastava, Co-founder and CEO of SmartE

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EV Feature
Which Indian state offers the most subsidies for electric vehicle makers and buyers

EVisual | EV Podcast

WATCH
Presenting EV Connect Powertalk - Exclusive monthly interviews with EV experts, policymakers and stakeholders discussing key insights. We also present one hand-picked video that showcases a global EV innovation.
“Financing is a major barrier for EVs uptake, especially electric three-wheelers. The government must create a balanced financing opportunity for every transport mode just like electric cars.”

“In India, we have the manpower to run, maintain and manage electric vehicles. But there is a big skill gap in the industry. Government must look at institutionalising training or certificate courses for the EV drivers or mechanics to encourage them to enroll for skill development courses.”

Interviewer: SmartE is one of the largest e-mobility service providers in the country, can you elaborate more on your services?  
Mr. Srivastava: SmartE was founded in 2014 to offer zero-emission last-mile connectivity in cities. In the last seven years, we have offered 70 million+ rides using a large fleet of electric three-wheelers. We are also involved in the last-mile delivery of goods for B2B clients. We have built India’s largest EV charging infrastructure at more than 60 locations. SmartE is proud of creating zero-emission mobility for a greener and cleaner future for our country.

Interviewer: What are the challenges SmartE is facing in the EV market?  
Mr. Srivastava: Currently, there are two large challenges for EV players. First is in the supply chain side. For instance, the quality of vehicles and batteries is not up to the mark. The manufacturers in our country need to do a lot more to improve the overall product quality, reliability and safety. Secondly financing is a major barrier. Most of the banks or traditional financers generally don’t finance electric three-wheelers (2-3Ws), and Non-bank financial institutions (NBFCs) tend to charge high interest rates and the terms and conditions are prohibitive. It becomes hard to attract consumers to buy an EV, especially the auto-rickshaw drivers who are dependent on EV financing. The government must create a balanced financing opportunity for every transport mode just like electric cars.

Interviewer: What are your thoughts on the shortage of skilled workforce in India’s EV market?  
Mr. Srivastava: In India, we have the manpower to run, maintain and manage electric vehicles. But there is a gap when it comes to the right skills. At SmartE, we provide training to our employees. However, to attract fresh talent, we need to think about skill development courses. We also need to improve the financial literacy of the workforce especially the EV drivers as they don’t have much information about the banking and credit systems.”
Interviewer: How can government help in enhancing skill development in the EV sector?
Mr. Srivastava: I think the government has a very important role to play. We are working with multiple governments, like the Delhi government on their skill development initiative and the Automotive Skills Development Council (ASDC) on introducing a curriculum. Government can also look at institutionalising training or certificate courses for the drivers or mechanics to give them a kind of recognition in the market. They can also be provided with adequate financial incentives to encourage them to enroll in skill development courses.

Interviewer: What positive changes have you seen in the Indian EV industry in the last few months?
Mr. Srivastava: When SmartE began its journey, there were hardly any policies at the central or the state government level. But now I see a lot of policy deliberations, whether it is from the Department of Heavy Industries (DHI) or NITI Aayog in terms of strategic interventions or states like Delhi, Karnataka, Maharashtra who are taking huge steps to scale up EV adoption.

From OEM perspective, the market now has long-term players than short-term operators. Focus on domestic production has also encouraged OEMs to develop good-quality products. We have also seen a massive shift in terms of battery chemistries like their usage, migration to lithium-ion batteries and swapping.

Also, a lot more focus on public outreach campaigns has created a behaviour-change among people making them to switch to EV. This decade is very crucial for the industry as we are going to see a significant increase in awareness campaigns and capacity-building activities, introduction of quality products and greater support from the government in terms of policies.

Interviewer: How can organisations like WRI India make the journey better for the industry players and startups?
Mr. Srivastava: WRI India has played a phenomenal role in the area of electric mobility and integrated transport. The organisation, through its research has created a strong connection between the government and private players. I would recommend that WRI India should work closely with the government (central and state) to help them formulate and implement effective policies that can further EV adoption in the country.
UPDATES FROM THE WORLD

Joe Biden urges US carmakers to sell at least 40% electric cars by 2030 | Strategy and Initiative
Summary of news: US President Joe Biden recently signed an executive order that requires at least 40% of all new cars sold by 2030 to be electric in the country. He urged the carmakers to make a voluntary pledge to sell at least four electric cars out of every 10 vehicles sold in the next few years to reduce greenhouse gas emissions in the country. Unlike many countries, United States is yet to set an expiry date on vehicles running on conventional fossil fuel. Read more

Takeaways for India: The government of India is proactively working towards accelerating EV adoption in the country. Recent amendments in the FAME-II scheme along with various states announcing ‘progressive’ EV policies have spurred numerous opportunities for EV players as well as consumers. Policies that offer incentive support and cater to innovative business models and technologies will significantly boost the EV industry of India.

DHL orders a fleet of all-electric planes as logistics sector gets serious about emissions | Strategy
Summary of news: DHL Express- the air cargo subsidiary of Deutsche Post AG, ordered 12 all-electric aircraft ‘Alice’ to complement its fleet of battery-powered delivery vans and bikes. The move is an attempt to reduce GHG emissions from air services. The electric aircraft can be charged in 30 minutes while loading and unloading operations. The aircrafts are slated to join DHL’s fleet in 2024 and will be deployed on routes in California. Read more

Takeaways for India: Electrification of every transport mode plays a crucial role in reducing GHG emissions. Such initiatives will help intensify pressure on transport providers especially the logistics sector to lower emissions and minimize the impact on climate change. In India, many e-commerce service providers have switched to EV fleets with an aim to greening the last-mile delivery. However, EV transition in the air logistics sector needs a carefully planned strategy and an ecosystem approach.

Hyundai, LG to build $1.1 billion electric vehicle battery plant in Indonesia | Market Development
Summary of news: South Korean conglomerates Hyundai and LG recently announced to jointly build a $1.1 billion electric vehicle battery plant in Indonesia to take advantage of the country’s potentially vast consumer market and rich natural supply of nickel. The joint venture will start production with an annual capacity of 10 gigawatt-hours of battery cells in 2024. The Indonesian EV market is expected to grow to $816.22 million by 2025. Read more

Takeaways for India: India has access to various raw materials that have the potential to spur the domestic production of electric vehicle batteries. Several leading automakers, startups and OEMs have started producing or have announced plans to make EV components like batteries locally. Such partnerships can significantly change the outlook for India’s battery market over the next decade.
Electric vehicle charging points to be required at new buildings in Ireland  |  Market Development

Summary of news: As part of its commitment towards the clean energy transition, the Department of Housing, Ireland recently mandated fresh regulations to install charging points for electric vehicles at the new buildings. The regulations state that all the new buildings and those undergoing substantial renovation works will have to include charging points if they have more than 10 car parking spaces. The regulations apply only for buildings where construction or renovation was made after March 10, 2021. Read more

Takeaways for India: In India, the lack of charging infrastructure at convenient locations is a critical obstacle to boost individual EV uptake. Recent studies have shown that about 50-80% of private charging happens at homes and another 15-25% at the workplace, which means that the government needs to work on formulating and implementing effective policies, norms, building bye-laws and standards to prepare our buildings for an EV-ready future.

Russia plans to subsidise electric cars to spur demand  |  Strategy and Initiative

Summary of news: To stimulate demand and production in the country’s EV market, Russia plans to subsidise the purchase of domestically manufactured electric vehicles. Out of an estimated total of 45 million cars driven in Russia last year, only 11,000 were EVs and most of them were used cars. The subsidy is aimed at making Russian-made EVs more affordable. The country is targeting annual EV production of 220,000 units by 2030. Read more

Takeaways for India: In India, while the central government is offering subsidies under the FAME-II scheme, many state governments are helping manufacturers by offering additional subsidies for domestic production. The domestic production of EVs will not only bring down the vehicle cost but will also persuade consumers to switch to EV.

Unions, utilities, environmental groups come together on sweeping EV charging initiative  |  Strategy and Initiative

Summary of news: A coalition of 24 groups representing thousands of companies, union members, investors, and advocates – came together for the ‘National EV Charging Initiative’ to spur the construction of a national electric vehicle charging network in the United States. The initiative will push for deeper commitments from member groups and the federal government to make national EV charging infrastructure a reality in the country. Read more

Takeaways for India: In India, many key electric mobility stakeholders as well as central and state governments are leveraging and streamlining EVs to create a favourable ecosystem. However, it needs to be more coordinated. Such coalitions provide a platform to exchange best practices between industry and government representatives that further encourages investments, adoption, and ensure fair operation in the EV industry.
UPDATES FROM INDIA

Niti Aayog releases handbook for EV charging infra implementation  |  Policy Initiative
To enhance the necessary infrastructure to facilitate a rapid transition to electric mobility in the country, NITI Aayog released ‘The Handbook for Electric Vehicle Charging Infrastructure Implementation’ to help state governments and local bodies to frame policies and norms towards setting up charging networks for electric vehicles. The handbook has been jointly developed by Niti Aayog, Ministry of Power (MoP), Department of Science and Technology (DST), Bureau of Energy Efficiency (BEE), and World Resources Institute (WRI) India. Read more

Electric vehicles exempted from registration certificate fees  |  Policy Initiative
The Ministry of Road Transport and Highways (MoRTH) recently issued a notification to exempt battery-operated vehicles from the payment of fees for issue or renewal of registration certificate and assignment of new registration mark. The ministry in its statement said it will encourage e- mobility and will bring uniformity across the country. Of late, many states have waived off registration fees for EVs in their electric vehicle policies. Read more

1,04,806 electric vehicles registered in 2021; 5,17,322 over last three years: Centre  |  Strategy and Initiative
The Ministry of Heavy Industries announced that 1,04,806 electric vehicles have been registered in the country during 2021 (till July 19). The Ministry also added that as per the e-vahan portal, a total of 5,17,322 EVs have been registered in the country over the last three years. Currently, Phase-II of FAME India scheme is being implemented for 5 years which mainly focuses on supporting electrification of public & shared transportation through subsidies. Read more

HPCL ties up with CESL to set up EV charging points in metro cities across India  |  Strategy and Initiative
Convergence Energy Services Limited (CESL) - a wholly owned subsidiary of Energy Efficiency Services Limited (EESL) – recently signed an agreement with Hindustan Petroleum Corporation Limited (HPCL) for setting up charging infrastructure in selected retail outlets across the country. The charging stations will be installed with fast, slow or moderate speed capacity chargers. They will be operated through an app of CESL, which will facilitate monitoring and control of all charging stations. Read more
Electric vehicles share increased by three times in Delhi in last one year  |  Market Development
The Delhi Government recently stated that the share of electric vehicles in the sales of new vehicles increased by three times in last one year in the national capital. The government revealed the state’s share of EVs increased from 1.2% (August 2019 to July 2020) to 3.3% (August 2020 and July 2021). The number of e-2Ws (August 2020-July 2021) doubled from 1,013 units to 2,243 while the adoption of electric four-wheelers has grown by 20% (813 to 1,002 units). Read more

Swiggy partners with Reliance BP Mobility to build EV ecosystem  |  Market Development
Online food delivery platform Swiggy has signed an agreement with Reliance BP Mobility Limited (RBML) to build an EV ecosystem and battery-swapping stations for its delivery partners across the country. Recently, Swiggy has also partnered with Hero Lectro to enable last-mile delivery of its orders through cargo e-cycles. The initiative is currently live in Hyderabad while trials are underway in Bangalore and Delhi. Read more

CESL floats tender to procure 1 lakh electric three-wheelers  |  Market Development
Convergence Energy Services Ltd (CESL) recently issued a tender for the procurement of 1,00,000 electric three-wheelers (e-3W) with an estimated cost of Rs 3000 crore. In its request for proposals, CESL invited original equipment manufacturers (OEMs) to provide quotations for E3W under different use-cases including, garbage disposal, freight loaders, food and vaccine transport and passenger autos. Read more

eBikeGo launches new IoT system to analyse usage of electric two-wheelers  |  Market Development
Mumbai-based EV startup- eBikeGo launched a unique IoT system connected to mobility- ‘EBG-Matics’ to make its fleet smarter and more efficient. The company stated that EBG-Matics uses AI and machine learning to analyse rider and vehicle behaviour to track and improve efficiency. The data collected can also be used to lower maintenance costs, offer usage-based insurance, raise vehicle secondary sales prices, improve vehicle safety, and extend vehicle life. Read more
Opportunity for Electric Two-wheeler (e-2W) in Hyperlocal Economy of India

By Dr. Parveen Kumar, Leona Nunes and Madhav Pai

In the sphere of urban goods delivery, 2Ws are emerging as a preferred option for last-mile and hyper-local delivery. WRI India’s Total Cost of Ownership (TCO) analysis suggests that e-2Ws are more economically viable than their Internal Combustion Engine (ICE) counterparts. Hence, the adoption of e-2Ws will not just help in reducing the operational cost but also will keep a check on emissions. Read more

REIMAGINING PUBLIC TRANSPORT IN INDIA THROUGH ELECTRIFICATION

At a time when public bus agencies are struggling to identify resources for fleet augmentation, central and state subsidies have been helpful in driving electric bus adoption in the country. These subsidies have been instrumental in not only scaling up clean public transport, but also add to the overall public transport supply in cities. Through this discussion, WRI India spoke to key stakeholders who are driving electric bus transition in India to explore challenges, opportunities, solutions and way-forward for the optimization of bus-based public transport in India. View recording here
Check out which Indian state offers the most subsidies for electric vehicle makers and buyers

by Parikshit Luthra | July 2021 | This article first appeared in cnbctv18.com

Electric vehicles account for barely 1.3 percent of total vehicle sales in India currently. Compared to 1.86 crore petrol and diesel vehicles, only 2.38 lakh electric vehicles were sold in FY21. Despite the Union government pushing hard for the adoption of electric vehicles over the last five years, India's EV ecosystem is still in its nascence. Lack of awareness about running cost, battery life cycle and just over 2400 charging stations across India are a few things making prospective buyers think twice. However, the situation appears to be improving with state governments unveiling a raft for incentives for EV makers as well as buyers. Today more than 13 states have notified electric vehicle policies.

It is important to note that the central government recently raised the financial incentive on electric two wheelers from Rs 10000 to Rs 15000/kWh, subject to a limit of 40 percent of the vehicle cost. This incentive is available to EV buyers across the country and some states like Maharashtra, Gujarat and Delhi are offering subsidies in addition to the Rs 15000/kWh subsidy available under the union government’s Faster Adoption and Manufacturing of Electric Vehicles scheme.

“Of the 13 states which have notified EV policies, Delhi, Maharashtra and Gujarat are providing strong purchase incentives. What is important to note is that with the states topping up FAME II incentives of Government of India, upfront cost of EVs in these states in coming down by 50 to 65% and bringing them at par with internal combustion engine vehicles”, said Akshima T Ghate, Principal, RMI India. Let’s take a close look at some state government electric vehicle policies and how they impact the consumer and seller.
MAHARASHTRA
Maharashtra’s electric vehicle policy is the most recent and extremely friendly for both consumers and manufacturers. Buying an EV could be cheaper in Maharashtra than any other state this year, compared to other states. Why? Because the state is providing an incentive of Rs 5000/kWh for all vehicle categories, along with an early bird discount of Rs 5000/kWh. The maximum subsidy on electric two wheelers is Rs 10000, Rs 30000 on electric three wheelers, Rs 150000 on electric four wheelers and Rs 20 lakh on electric buses.

So if you are buying an electric two wheeler which has a 3 kWh battery pack, then the maximum subsidy would be Rs 10000. But, if you buy it before December 31 this year then you get an early bird discount of Rs 5000/kWh. So along with a regular subsidy of Rs 10000 you could get an early bird discount of Rs 15000. That’s not all: the state is also offering a subsidy of up to Rs 7000 on the purchase of your new electric two wheeler if you scrap your old petrol two wheeler. On top of the above financial incentives, Maharashtra is the first state to provide incentives to automobile companies to give a 5-year battery warranty to customers.

GUJARAT
In terms of subsidies, Gujarat is offering the highest subsidy of Rs 10000/kWh. The maximum subsidy on electric two wheelers is Rs 20000, Rs 50000 for electric three wheelers and Rs 1.5 lakh on electric cars. The state has also announced a waiver of registration charges which is barely a few hundred rupees but unlike the Maharashtra government it has not waived off the road tax which could be 6 percent of the vehicle cost. On the charging front, while Maharashtra is offering a maximum subsidy of Rs 5 lakh, the Gujarat government is offering a maximum subsidy of Rs 10 lakh. Maharashtra is looking to setup over 2400 charging stations in just 7 cities in the coming years, Gujarat is looking at about 528 charging stations.

DELHI
Delhi government is in the process of making minor tweaks to its EV policy which was launched in 2020. One of the additions could include guidelines for an electric bike taxi scheme similar to the one launched by the Karnataka government. Launched in August 2020 with a three-year roadmap, the Delhi government’s EV policy is one of the most comprehensive in the country. The policy offers Rs 5000/kWh subsidy on electric two wheeler, subject to a maximum limit of Rs 30000. Currently all electric scooters in India have a battery capacity of 2-3 kWh, which means the maximum subsidy you could get would be Rs 15000. The state also offers a subsidy of up to Rs 30000 on electric three wheelers, Rs 1.5 lakh on electric cars.

Just like Maharashtra, the Delhi government also provides you scrapping incentives in the range of Rs 5000-7000, waiver of road tax and registration charges on electric vehicles. “Most of the states that are aiming for charging infrastructure deployment are targeting at least 1 public charging station in a grid of 3X3 km in cities. If successfully achieved, this should translate into adequate charging stations in populated cities of different states. Maharashtra and Delhi in particular are giving a lot of emphasis to slow chargers and providing significant capex subsidy on slow chargers. The expectation would be that these states would be able to have a high density of slow chargers in the next 2-3 years”, said Akshima T Ghate, Principal, RMI India.

KARNATAKA
If you buy an EV in Karnataka, you would be eligible for a subsidy under the union government’s FAME scheme, which could be 15000/kWh but the state does not offer the kind of subsidies offered by Gujarat, Maharashtra or Delhi. Karnataka government has recently launched the electric bike taxi scheme, allowing aggregators like Rapido, Ola, Uber to register as e-bike taxi operators. These taxis would be allowed to ply for ten kilometres and could give a boost to electric vehicles in the last mile mobility segment. Karnataka was the first state to launch an electric vehicle policy back in 2017. The state recently tweaked its policy to give a 15% capital subsidy to investors in the electric vehicle sector. It has also decided to replace 50% of state government vehicles to electric in the next 2-3 years.
**TELANGANA**

Telangana had rolled out its electric vehicle policy in 2020. The state offers 100% exemption from road tax and registration on all categories of electric vehicles but currently does not offer the kind of subsidies offered by Maharashtra, Delhi and Gujarat. However, the state does offer some strong supply side incentives such as capital investment subsidy of up to Rs 30 crore, SGST reimbursement up to 5 crore per year, power tariff discount up to 5 crore and interest subvention of up to 5 crore. The state also offers tailor made benefits to mega and strategic projects on a case by case basis. Recently, US based EV manufacturer Triton EV signed a MoU with the government of Telangana to invest over 2100 crore in an electric vehicle manufacturing plant. Telangana government officials are currently studying the restructured FAME scheme and other state government policies and may announce some changes to their policy launched in 2020.

“Beyond the fiscal incentives that are bringing down the upfront cost and total cost of ownership of EVs, most of the states are making significant regulatory reforms and tax exemptions for EVs, such as open permit system for e-autorickshaws, waiver of road tax and registration charges, provision for reserved parking for EVs, all of which would go a long way in making EVs competitive with their ICE counterparts”, said Akshima T Ghate, Principal, RMI India. Currently, Delhi, Maharashtra, Karnataka, Kerala, Bihar, Uttarakhand, Tamil Nadu, Andhra Pradesh, Telangana and Punjab offer 100 percent road tax exemption for newly-purchased electric vehicles. Tesla’s plans to launch the Model 3 in India and Ola Electric’s debut has created a lot of excitement. While Ola is set to launch its electric scooter in less than 20 days and hopes to sell over a million vehicles this year itself, Tesla will soon begin India sales and is exploring the possibility of manufacturing Tesla cars in India in future. At least six states are in talks with Tesla and have offered them land and other concessions. Clearly, competition among states may not just bring down prices for the EV buyer but may also give some very lucrative deals to electric vehicle manufacturers.
**EV Podcast**

**Changing shape of state EV policies**

A total of 16 states in India have now formulated or proposed dedicated electric vehicle policies with Rajasthan, Maharashtra, and Gujarat being the latest entrants. To accelerate EV adoption, most of these policies are centered around the customers, which include cash incentives, tax exemptions or subsidies. The podcast explores the changing shape of state EV policies and how they can help achieve India’s ambitious goal of reaching 30% EV penetration by 2030.

Listen to the podcast [here](#)