



# EVCONNECT

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NEWSLETTER

## INSIDE THE ISSUE

### Power Talk

In conversation with Prasanna Patwardhan, Chief Managing Director of Prasanna Purple Mobility Solutions Pvt. Ltd.

### Updates from the World

- China's EV sales show signs of recovering from the Coronavirus pandemic
- GM is working with Honda to build two new electric vehicles
- Electric cars produce less CO2 than petrol vehicles, study confirms

### Updates from India

- There is a new entrant in India's electric rickshaw race
- Mumbai-based startup to launch EV chargers integrated with streetlamps
- BHEL wins order for supply of electric buses to Uttar Pradesh

### EV @ WRI

A Webinar on "Electricity pricing and charging strategy for electric vehicles in India"

### EV Feature

Bogota company deploys 400 free e-bikes to help health workers respond to Covid-19

## FROM THE CEO'S DESK

Dear Friends,

I hope this newsletter finds you, and those around you, safe and healthy amid the ongoing Coronavirus pandemic.

Given this unprecedented global public health crises, many of us in the transport community are wondering how public and electric transport system will be impacted. We spoke with Mr. Prasanna Patwardhan (Prasanna Purple Mobility Pvt. Ltd.) to understand how passenger transport businesses are viewing their evolution post-Covid-19. We believe investments in electric vehicles will continue to benefit society and the country at large. There have been uplifting examples of our ingenuity in adversity with clean and electric vehicles serving as the tool. For instance, electric bikes are being used by health care staff to reach hospitals in Bogota while electric rickshaws are offering mobile doorstep grocery shops and safety kit shops in India.

It is often difficult to keep up with new developments in the electric mobility space. These are reported through multiple media channels and are hard to track. This newsletter seeks to bring together several of these developments into one accessible document. We hope this curated and compiled content will come in handy to those who are seeking the latest information on electric mobility.

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

Keep up your spirits.



Sincerely,

Dr. OP Agarwal  
CEO, WRI India

## WATCH

Presenting the monthly EV Connect Powertalk interviews exclusively discussing insights from EV experts. We also present one hand picked video to showcase EV innovations from across the world.



**Power Talk with Prasanna Patwardhan**, Chief Managing Director of Prasanna Purple Mobility Solutions Pvt. Ltd.



**Business on Wheels - Mauto Electric Auto Rickshaw Idea in Lockdown** by Mauto Electric Auto Rickshaw



# POWERTALK

**IN CONVERSATION WITH PRASANNA PATWARDHAN,**  
CHIEF MANAGING DIRECTOR OF PRASANNA PURPLE MOBILITY  
SOLUTIONS PVT. LTD.

*Interview taken by Neha Yadav, WRI India*

“The challenges are how do we keep our staff safe, how do we train them, how do we sanitise our vehicles, what precautions should we take to ensure the safety of travellers, what terms and conditions of operations do we need to adopt — the standard operating procedures will change.”

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**Interviewer:** How do you see the landscape of Indian public and private bus operations evolving in the post-Covid-19 context?

**Prasanna:** These are challenging times and certainly, there will be many more changes. One of the major changes that will come about will be personal hygiene and how that will change expectations in terms of the hygiene of the bus, and bus staff, along with ensuring the safety of all. Because of this, the ridership is likely to come down as the buses will not be able to accommodate standees or overcrowding. Probably now there will only be one person sitting on two seats. We will have to ensure our staff and software adapt accordingly and we will have to make changes in our business plans as well.

One of the things which would probably impact the business is consolidation which is inevitable considering the survival of small operators will become difficult. So, people will have to come together and pool their strengths. Consolidation of businesses will happen. We will also see more organized and better players surviving to provide services. This will also mean that the quality of services will go up.

**Interviewer:** India recently moved to BS VI emissions norms with funds allocated for electrifying public transport through FAME 2, a transformative MV Act. The intent to build clean and shared transportation in cities is clear. To keep up this momentum, amid the economic recovery post-Covid-19, what actions on the part of the government and businesses are important in your opinion?

**Prasanna:** If we really are serious about electrification of transportation, then the government will have to support businesses more. Not just operators or those in public transport, they will have to support manufacturers of electric vehicles as well — particularly manufacturing of batteries where we have to do something on our own because we cannot remain dependent on China. We will have to be self-dependent. This means that under *Make in India* the government will have to offer concessions and subsidies which will facilitate manufacturing of batteries

and electric vehicles within India itself. Remaining dependent on China while pursuing electric mobility in India will become more and more difficult, going forward. So, for electrification particularly, we should become as independent as possible and as soon as possible. For businesses, the challenges are how do we keep our staff safe, how do we train them, how do we sanitise our vehicles, what precautions should we take to ensure the safety of travellers, what terms and conditions of operations do we need to adopt — the standard operating procedures will change. Until the Covid-19 vaccine comes in, we will have to find a course of action to safeguard our staff and customers.

*Interviewer:* **What role can organizations like WRI India play in this process?**

*Prasanna:* One of the things we are finding difficult is determining what kind of safety measures, equipment, machinery and systems to employ in transport operations to ensure public health and safety. We do not know much about the entire ecosystem; we need to have knowledge about how to tackle this new challenge. Secondly, the government will have to support the survival of transport operators until the Covid-19 vaccine arrives. Because if they don't survive, traffic control on the road is going to be a serious challenge. Thirdly, the supply of products and equipment necessary to face this challenge. WRI India as well as the government can take a lead in these three matters. They can ensure that operators are well educated and follow standards for protecting public health.



## UPDATES FROM THE **WORLD**

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### **China's EV sales show signs of recovering from the Coronavirus pandemic** | *Market Development*

Sales of new vehicles in China tumbled in February as much of the country was in a lockdown due to the coronavirus pandemic. However, the numbers improved in March. For instance, Shenzhen electric vehicle maker BYD only sold 2,533 electric cars and 206 plug-in hybrids (PHEVs) in February, while in March, the company achieved sales of 10,433 electric cars and 1,330 PHEVs. As a point of comparison, BYD sold more than 30,000 electric vehicles in March last year. The Chinese government has indicated that it might alter its earlier plan of phasing out incentive programs for manufacturers of electric vehicles. [Read more](#)

*Takeaway for India:* The fluctuation in the EV market is a natural result of the ongoing pandemic. Nonetheless, the advantages electric vehicles offer are beneficial for Indian cities in the long run. Policymakers should structure programs that support growth in the electric vehicle market.

### **GM is working with Honda to build two new electric vehicles** | *Technology and Market Development*

General Motors and Honda are partnering to develop two new electric vehicles. While the vehicles will have Honda nameplates they will carry GM's new flexible EV platform with its Ultium-branded improved battery packs. Honda will design the exteriors and interiors of the vehicles with GM's platform engineered to support Honda's specifications. Manufacturing will take place at GM's North American plants. Sales are expected to begin in 2024. [Read more](#)

*Takeaway for India:* While both GM and Honda have shuttered their operations for the duration of the pandemic, this partnership between automakers, to share technologies and expertise, is a model that can be explored in India as well.





### **Electric cars produce less CO2 than petrol vehicles, study confirms** | *Policy and Market Development*

Electric vehicles produce less CO2 than petrol cars across the vast majority of the globe according to a study published in the journal Nature Sustainability. This comparison includes the CO2 emitted in the production of electricity and manufacture of vehicles. E.g. in Sweden, which gets most of its electricity from renewable sources, the CO2 savings from using electric cars are 70% more than their conventional counterparts. Whereas in the UK, the savings are about 30%. However, improvements are likely as electricity systems become low carbon and electric cars become more efficient. [Read more](#)

*Takeaway for India:* This finding gives yet another clear signal that combined efforts for renewables and electric vehicles hold potential for creating a clean energy-based transport system in India.

## **UPDATES FROM INDIA**

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### **There is a new entrant in India's electric rickshaw race** | *Market Development*

Motorbikes and three-wheelers dominate Indian roads. With the Indian government planning on allowing only electric two and three-wheeled vehicles by 2025, a Bangalore-based startup, Altigreen, aims to fill the gap as it debuts its electric three-wheeler in the next quarter. Altigreen, founded in 2012, started out retrofitting diesel and petrol cars with electric motors to convert them to hybrids. Their proposed electric three-wheeler will have a top speed of 53 kms/hr and will be able to get charged within four hours via an ordinary AC power socket. [Read more](#)

### **BHEL wins order for supply of electric buses to Uttar Pradesh** | *Policy and Strategy*

Bharat Heavy Electricals Limited (BHEL) will be supplying electric buses and associated charging infrastructure in Gorakhpur, Uttar Pradesh. The order was placed by the Urban Transport Directorate (UTD) in Lucknow with the electric buses set to be deployed at the Gorakhpur airport. [Read more](#)



## Mumbai-based startup to launch EV chargers integrated with streetlamps | *Market Development*

Magenta Power has announced plans to roll out electric chargers, integrated with streetlamps, to help promote the uptake of electric vehicles. The chargers are being designed in partnership with HPCL and offer energy-efficient streetlighting systems combined with curbside EV charging points. [Read more](#)



## EV @ WRI

### A Webinar on “Electricity pricing and charging strategy for electric vehicles in India”

*Listen to the full webinar [here](#)*

Recent growth in electric vehicle (EV) adoption has raised the question of how EVs impact the electricity rates paid by households, including those that do not own EVs. This is an important equity question that should be analyzed when determining the role that electric utilities should play in supporting the transition to EVs. By motivating EV owners to charge their vehicles, when power supply exceeds demand, dynamic pricing can improve system load shape and capacity utilization, reduce consumer costs and cut pollution.

In this webinar recording, Abhishek Ranjan, AVP & Head – Renewable and DSM Initiatives, BSES Rajdhani Power Ltd., sheds light on:

- How do we manage TOD (Time of the Day)/TOU (Time of Use)/Hourly pricing of electricity as per charging technologies for electric vehicles in India?
- How do we link renewable energy to charging infrastructure for electric vehicles?
- What are the effective charging infrastructure planning mechanisms on existing electricity distribution lines?
- What could be the most sustainable and efficient business models for execution of the same?
- How is real-time monitoring done in the most effective way?





# EV FEATURE

## Bogota company deploys 400 free e-bikes to help health workers respond to Covid-19

by Carlos Pardo, Manager of Pilots for NUMO, the New Urban Mobility alliance | March 2020

COVID-19 is shutting down urban transportation networks around the world. But to “flatten the curve” and save lives, critical frontline health workers still need to get to work. In Bogotá, Colombia, where the city has already experimented with providing emergency bikeways, a new initiative is providing free access to an e-bike fleet for medical workers as the city begins to shut down all non-essential travel.

On March 27, medical workers across the city began to receive electric bicycles from micromobility operator MUVO to facilitate their mobility and ability to provide life-saving services. MUVO agreed to repurpose its entire fleet of 400 bicycles, giving them over for personal use for one month initially, and Despacio, a local non-governmental organization, and NUMO, the New Urban Mobility alliance, agreed to co-fund operations. The city government is coordinating logistical support.

The innovative idea sprang from an intensive four-day virtual MOVID19 Hackathon by NUMO and Datasketch, in partnership with several international and local organizations as well as the city of Bogotá. Travel is currently curtailed in Bogotá because of the COVID-19 pandemic and a citywide quarantine. Participants in the hackathon had access to resources to better understand mobility data under these new conditions, including open transport data from the city and private service operators, and were challenged to come up with creative solutions. The hackathon was hosted on Github and designed for replicability to encourage other cities to add their own data and host their own hackathons.

Of 44 total participants, 3 projects were awarded small cash prizes for their outstanding potential. The first-place winner of the hackathon designed and implemented a digital tool using data from a 2019 mobility survey to reroute transit to better serve users during the pandemic. The second and third-place winners called for providing health

workers with bikes to increase their mobility and reduce their risk of contagion. They identified locations of clinics and other points of service for health care that need more flexible mobility options, and looked at the problem from the other direction by mapping where essential workers live in the city.

NUMO and Despacio saw an opportunity to build on these ideas and begin an immediate pilot project to learn more. Many medical personnel are experiencing significant mobility challenges in Bogotá. They tend to rely heavily on public transit and shared micromobility services, both of which have all but disappeared in response to reduced demand and the citywide lockdown. Providing e-bikes to workers helps fill the gap, while reducing contact with others.

The first step was to find a provider and designate funds to cover operating costs. Now, MUVO, NUMO, Despacio and the government of Bogotá are looking for operations, logistics and financial support.

As in all responses to COVID-19, this is a rapidly evolving situation. Considerations on the table include providing health workers with permanent access to bicycles throughout the duration of the pandemic; increasing availability of secure parking places for micromobility vehicles of all kinds (scooters, cargo bikes, personal bicycles, etc.); expanding micromobility infrastructure for safer rides and faster routes that complement mass transit corridors of highest demand; and improving security, as health workers often have shifts that begin or end at night. Guidelines are also being developed to assist in replicating and communicating these efforts.

Open data and cooperation were crucial in implementing both the hackathon and this solution as rapidly and effectively as possible – one of many, we hope, to spin out from the exercise. The city's mobility secretariat is working to integrate solutions from all three winners and other ideas from the hackathon into projects to improve data quality, integrate analysis into policy decisions and more.



## COURTESY FOR THE ARTICLES

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## PHOTO CREDIT

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## VIDEO CREDIT

MAuto Electric Auto Rickshaw: <https://youtu.be/4ZCXhSUmpho>

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