NB Digital Technologies

Your Growth Partner

E-Rickshaw-Vayu Rakshak

Date: 30.01.2019.

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Introduction

Raipur is one the fastest growing capitals in the Country. Its rapid and dynamic nature has attracted students and workers from across the country. With its growth, it requires rapid developments and upgrade in its infrastructure. Its infrastructure demands faster, safer and cheaper mode of conveyance.

Raipur has met such demands but with major side effects. With the rapid increase in numbers of diesel autos, have caused a severe damage to its air and to a great extent the unorganized auto rickshaw drivers create chaos in the traffic system.

'Black Autos' (diesel autos) are used as the major means of public transport. It has thousands of daily commuters. With the increase in numbers of these autos, they have contributed most in polluting Raipur's air. Making it the seventh most polluted city in the World.

Increase in the numbers of un-regulated and unregistered rickshaws have damaged the traffic system to the greatest extent.

Chhattisgarh capital Raipur 7th most polluted in world: WHO

Rashmi Drolia | TNN | Updated: May 13, 2016, 13:23 IST

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Raipur: Chhattisgarh capital Raipur has earned the dubious distinction of being among seventh top polluted cities in the world—relegating Delhi to the eleventh spot—but the only solace is that the situation of air pollution here is better than Gwalior, Allahabad and Patna as

https://timesofindia.indiatimes.com/city/raipur/Chhattisgarh-capital-Raipur-7th-most-polluted-in-world-WHO/articleshow/52252399.cms

What's the remedy?

Increasing the number of quality E-rickshaw which has 'ZERO EMMISION', on the roads in a regulated and monitored method. By implementing 'E-rickshaw-Vayu Rakshak' project which is briefed below, we can encounter effectively this severe problem of air pollution and uncontrolled and unorganized means of transport.

The Devil of Diesel and Evil of Emissions.

Diesel engines have historically been more versatile and cheaper to run than gasoline engines or other sources of power. Unfortunately, the exhaust from these engines contains substances that can pose a risk to human health. Diesel exhaust contains several pollutants that contribute to the formation of ground level ozone, acid rain, climate change, and are harmful to public health alone or in combination with other substances.

Harmful ozone comes primarily from vehicle exhaust, gasoline vapors, and industrial emissions. Diesel emissions directly release fine particles into the air and on hot days, diesel exhaust from on-road vehicles and off-road equipment increases the level of ground ozone. These high levels of ozone and fine particles are detrimental to public health as well as to the environment. Exposure to diesel exhaust may result in cancer, irritate the eye, nose throat and lungs, it can cause coughs, headaches, nausea.

Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles.

What are the health effects of diesel exhaust?

Diesel exhaust is produced when an engine burns diesel fuel. It is a c complex mixture of thousands of gases and fine particles (commonly known as soot) that contains more than 40 toxic air contaminants.

Who is at risk? Individuals may react differently to the same type of exposure. The more sensitive portion of the population is likely to have a stronger reaction than the average healthy person. Children, elderly, and people with cardiovascular or ung disease, such as emphysema and asthma tend to be more vulnerable to exposure.

Diesel exhaust pollutants

Some of the pollutants found in diesel exhaust are listed below:

Carbon monoxide: Carbon monoxide is formed by incomplete fuel combustion. Carbon monoxide reduces the flow of oxygen in the bloodstream and is of particular concern to people with cardiovascular disease.

Fine particulate matter (PM 2.5) PM 2.5 is a mixture of solid particles and liquid droplets in the air. Because of its small size, fine particulate matter can be deposited deep in the lungs where it can cause health problems. Studies have shown an association between particulate matter and premature mortality from respiratory and cardiovascular disease and increased incidence of respiratory illness particularly in children and the elderly.

Hazardous air pollutants: Diesel exhaust contains 40 substances that the U.S. EPA lists as hazardous air pollutants. Fifteen of these pollutants are considered probable or known human carcinogens.

Hydrocarbons Hydrocarbons are formed by incomplete fuel combustion. When combined with nitrogen oxides in the presence of sunlight, hydrocarbons produce ground level ozone, which can irritate the eyes, damage lungs, and aggravate respiratory problems. Symptoms include coughing, shortness of breath, and decreased lung function. Many hydrocarbons are also considered hazardous air pollutants.

Nitrogen oxides Nitrogen oxides are by-products of fuel combustion and contribute to the formation of ground level ozone. Health effects include coughing, shortness of breath, and decreased lung function.

Current Scenario and Problems:

"India needs to focus on electrifying two wheelers and three wheelers", Shri Amitabh Kant, Chief Excecutive, NITI AYOG.

As many as 11,000 new e-rickshaws hit the streets every month, and annual sales are expected to increase about 9 per cent by 2021, according to consulting firm A.T. Kearney.

Unlike the estimated 1.35 million passenger EVs cruising around China, the number of electric cars plying Indian roads is a paltry 6,000, according to BNEF data.

https://www.business-standard.com/article/companies/with-an-arsenal-of-1-5-mn-e-rickshaws-india-leaves-china-far-behind-118102600853_1.html

Prime Minister Narendra Modi's administration now is pivoting toward promoting EVs in public transportation and fleet operations – primarily, two- and three-wheelers, taxis and buses. The ministry of finance is finalising a plan to spend about Rs 4,000 crore ($600 million) in the next five years to improve the nation's charging infrastructure and subsidize e-buses.

Delhi: As per a report of Centre of Civil Society (CCS), the number of E-rickshaws has risen from 4000 in 2010 to more than 1.3 Lakhs.

Problems that hindered the flourish of E-Rickshaw in Chhattisgarh:

1. Delay in disposal of subsidies.

2. Process of subsidy has a major issue.

3. Slow financing of E RICKSHAW.

4. Resistance in curbing diesel auto usage and lack of attractive policy.

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जमीन पट्टा को लेकर दिक्कतें

5. Municipal Council's resistance in paying electricity bills cost incurred from charging points.

6. Unavailability of charging points.

7. Target was 10,000 e rickshaws but, 500-600 autos were given.

An overview of the Project:

E-Rickshaw Vayu Rakshak project aims at improving, organizing, monitoring and overhauling of the current system of operation of auto rickshaw as means of public transport, with the use of technology and awareness programmes in partnership with the ministry of Transport and Highways.

E-Rickshaw Vayu Rakshak is aiming at creating jobs and providing better means of commuting for Raipur.

How and What?

E-rickshaw Vayurakshak project has multi dimensional approach to make e-auto rickshaw commuting organized, popular and monitored with the uses of below tools:

Android/ I phone mobile App:

Govt subsidy on the purchase of E-rickshaw: In the current scenario, the ministry provides subsidy of 50,000 rs to auto drivers. We will establish a structure for immediate release of the subsidy with proper bank tie up and instant disposal of loans and registration.

Rewards: We propose the government to provide 10,000 rs extra cash as rewards to the auto drivers who are applying for e-rickshaw after quitting diesel auto.

Cash back Rewards for both Passengers and Drivers: Commuters and Drivers who are registering with E-Rickshaw Vayu Rakshak app, will get commuting discount, that will help us to make E-Rickshaw usage popular and drivers will get additional benefit to pay their EMIs on auto loans. This will also encourage young commuters and rural riders to have a pocket friendly drive.

Battery Banks: We will make 50 battery banks across the city where an e rickshaw auto driver registered with us will be able to swap their discharged

battery from us and can continue their ride. This will create jobs and self employment.

Digital R.C.Book: This is one of the unique concepts that the e rickshaw driver will get immediate digital RC and that same will be printed on their dashboards with QR-codes, which will help a traffic police officer to just scan and identify them in case of rash driving or at the check points.

Gulaabi Auto Yojna: This will help for empowering women. Gulaabi Auto or Pink auto will help us to bring women drivers in mainstream and support them for livelihood. We propose ministry an extra 10,000 rs subsidy to all women drivers registering for Gulabi auto yojna along with E-Rickshaw Vayu Rakshak app. We will tie up with schools so that women drivers will pick and drop schools kids below the age group of 8-10 years. Enabling safe rides for children.

Solar Powered charging points: As our objective is green and pollution free Raipur, we propose establishment of solar powered charging points. This will eliminate electricity bill payment related issues.

Additional Perks: In partnership with the ministry for attracting the drivers for switching from diesel auto to E rickshaw we propose a free annual insurance and 3 wash free.

Awareness and Campaign: Previously, lack of awareness about e rickshaw and its usage hindered its popularity. We will run digital ads and design campaigns that will be of inclusive nature.