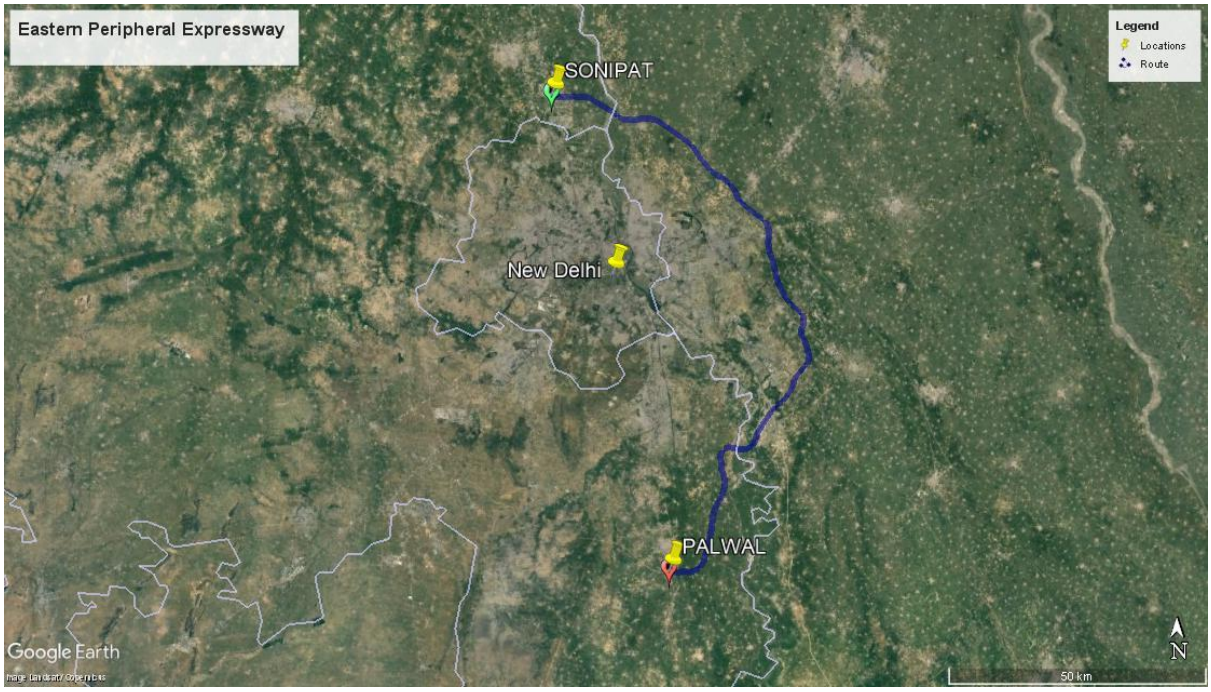
Prospectus Document

Eastern Peripheral Expressway

Eastern Peripheral Expressway (EPE) is a 135 Km long expressway alongside the eastern periphery of National capital region of Delhi. Along with Western Peripheral Expressway, it is the part of the largest ring road surrounding Delhi. It starts from Kundli, Sonipat of Haryana where it separates from Western peripheral expressway and traverses across Baghpat, Aligarh, Ghaziabad, Noida districts of Uttar Pradesh and Faridabad in Haryana. It rejoins the western stretch at Palwal. It was built with an aim to prevent pollution from large number of commercial vehicles entering into Delhi. It was expected that it would help in diverting more than 50,000 trucks away from Delhi and lessen the air pollution by 27 percent. It was also constructed to relieve the traffic congestion on the Ghaziabad-Faridabad route. It has a total of 406 structures which includes 46 minor bridges, 4 major bridges, seven interchanges, 3 flyovers, 8 railway over bridges, and 221 underpasses.

Eastern Peripheral expressway is the first green and smart highway of India and it has solar panels installed along the route to provide power to tool plazas and other facilities. Rain water harvesting systems have been installed at every 500 meter distance. The construction of EPE has led to a boost in development of real estate with cities like Baghpat, Palwal and Kundli becoming a hotspot for real estate investment.



Eastern Peripheral Expressway	
Length	135 Kms
Districts	Sonipat, Baghpat, Aligarh, Ghaziabad, Noida Faridabad and Palwal
Toll plazas	Sonipat, Baghpat, Akbarpur
Total Cost of Construction	₹11,000 crore
No. of Villages	77
In operation since	May, 2018
Managing Authority	Ministry of Road, Transport and Highway

Corridor Analysis

Of the three highway corridors surveyed (other being Delhi-Jaipur and Yamuna Expressway), EPE is least suitable for carrying out a pilot project to assess the feasibility of electrification of medium and heavy duty vehicles. Though, the ring road is specifically designed to keep commercial vehicles away from inner city regions due to pollution and traffic congestion constraints, the total absence of charging station on the expressway and in nearby regions does no suits well with the concept of running electric commercial vehicles on this route.

Moreover, EPE is distantly connected to the cities along the route and has not additional infrastructure support for the development of charging infrastructure.

Scouting for charging stations on the expressway could be a tedious task with charging stations only within inner regions of adjoining cities and none on the expressway itself.

The potential for deploying charging stations on EPE is quite massive in terms of land availability and charging stations powered by solar. But the absence of infrastructure support, poor accessibility to nearby cities which is somewhat essential for capacity and service network expansion and fragmented traffic movement makes the expressway the least favoured choice for carrying out a pilot project

SWOT Analysis of Eastern Peripheral Expressway

STRENGTH	WEAKNESS
• India's first green and smart highway Modern facilities like Highway Traffic Management System (HTMS) and an intelligent Video Incident Detection System (VIDS) • Huge potential for charging infrastructure development • Policy and regulatory support	• Absence of charging infrastructure • Poor accessibility cities along the expressway • Expressway specifically designed for long distant goods transportation • Comparatively less traffic movement
OPPORTUNITY	**THREAT**
• Development of not just charging infrastructure but whole EV ecosystem • Land availability and access to power is not a concern • Scope for establishing manufacturing units • Infrastructure specifically designed for heavy duty vehicles	• Possibility of investments turning into non-revenue generating assets • Limited scope for medium duty vehicles • Unregulated tariff structure as the expressway passes through different states • Safety concerns for charging infrastructure

Strength

- EPE is India's first green and smart highway which connects some of the major cities in Delhi NCR region. This expressway has some very modern facilities which are rarely found in other highways across the country such as Highway Traffic Management System (HTMS) and an intelligent Video Incident Detection System (VIDS).
- The area along the expressway is sparsely populated mostly consisting of villages. The land can be availed at far cheaper rates as compared to peri-urban areas
- It is also on the list of 16 highways on which Convergence Energy Services plans to set up charging stations

Weakness

- Presently, there are no charging stations along the route and mostly concentrated to inner regions of adjoining cities
- The cities along the expressway are distantly connected to EPE which creates a possibility of poor service network

- Mostly, vehicles on a long distant trip use this expressway in order to avoid the huge urban areas of NCR. This limits the demand only to such vehicles
- The traffic movement is also less as compared to other corridors further limiting the expansion of demand

Opportunity

- There is an opportunity of heavy investment backed infrastructure projects which under its ambit takes food and shopping complexes, resorts, recreational facilities, EV charging stations etc.
- Delhi NCR is host to a lot of EV manufacturing companies, which have their manufacturing plants in cities around EPE. Better charging infrastructure can bring a whole lot of economic opportunities for these organisations and can give a boost to the economic potential of this region
- Since this area is also an industrial hub, this would help them in decreasing the cost of transportation of goods

Threat

- Though this expressway has a range of modern infrastructure with amenities, it still seems unprepared for the extension of charging infrastructure. The charging infrastructure on this expressway is inadequate with most charging stations being inside the cities.
- Reports of theft, kidnapping and accidents on Eastern Peripheral Expressway have increased in recent years. Though patrolling vans are at every 25 km to avoid criminal activities, it points out the lackluster approach of administration with lack of modern facilities like automatic vehicle number plate readers and speed readers

Assessment

Eastern peripheral Expressway, which was built in only 17 months presents multiple opportunities and befits to each concerned stakeholders. In the case of development of EV ecosystem, EPE has great potential but lags far behind the other highway corridors studied. Several limitations as highlighted in the SWOT analysis make EPE the least prefer choice for the pilot project.

Probably, with more development in EV space and policy level interventions, the expressway can become investors' top most choice for establishing manufacturing units, installing charging stations and service centres but that scenario is still few more years ahead.