

“Assessing the Importance of Electric Vehicles in Advancing Sustainable Tourism and Hospitality: A Case Study of IHCL” (Indian Hotels Company Limited)”

Mr. Prasad Nawale and Dr. Saurabh Krishna

IHM – Aurangabad

Corresponding Author: - Mr. Prasad Nawale, Email: - prasad.nawale@ihma.ac.in

Abstract:-

Sustainability should not only be considered as a buzzword but rather a strong way to showcase your commitment and overall desire to play a crucial role in preserving the planet for the future generations. India has always been a ‘*Vishwa Guru*’ ‘*Global Leader*’ when it comes to the commitment for the sustainability, ecofriendly behavior and overall respect and sensitivity towards Mother Nature for thousands of years. Indian hospitality industry has also showed its commitment in the last few decades by adopting ecofriendly products, using renewable source of energies, creating awareness about the commitment towards clean and green planet and relying on the principles of 3 R (Reduce, Re use & Recycle). Further the Indian government’s commitment to achieve carbon neutrality by 2070 is strongly supported by all the industries, which is highly appreciated by the global economies. The current research attempts to highlight the demand of new upcoming concept of ‘*Greener Holidays*’ which have made sustainable mobility the need of an hour, where almost all domestic and global hospitality chains are striving to tap this upcoming segment. Sustainable mobility is going to be the major revolution in the tourism & hospitality industry and IHCL i.e. Taj group of Hotels have already gone out of the way to tap this segment showcasing their strong commitment towards sustainability and ESG framework. IHCL and its commitment towards nature and sustainability is highly commendable, and further the promotion of EV vehicles will reposition the brand IHCL as a major contributor of sustainability. The major objective of the research is to study the scope, and potential of sustainable mobility and EV vehicles in the Indian tourism & hospitality industry. The study also attempts to highlight the commitment of Taj group towards sustainability under Paathya initiative and its impact on overall brand image of IHCL. The study is qualitative in nature and used case study method by taking IHCL as the company to understand scope and potential of sustainable mobility and the use of EV vehicles in the Indian hospitality industry context. The major findings of the study highlights that EVs are the future of the mobility in the Indian tourism & Hospitality industry and IHCL has played a major role in showing its overall commitments towards sustainability under ‘*Paathya Initiative*’ and how sustainable mobility even contributes for the brand image & customer satisfaction. The present study is highly applicable in the current scenario of the Indian Tourism & Hospitality Industry as the industry is going through a major transformation especially in the field of transport and mobility.

Introduction:-

Transport is usually defined as a system which facilitates the movement of people, goods or any commodities from one place to another whereas tourism is associated with the movement of people when they are away from home, and travels for different purposes which could be leisure, family functions, adventure, pilgrimage, business, education, etc. (Page & Ge, 2009). Both tourism and transport share a strong relationship, which eventually leads to developing a '*symbiotic relationship*' which is highly essential for creating a lifetime memories for the guests who travels to different destinations to explore the hidden treasures of the destination. India as a major economy has always been dependent on the non-renewable sources of energy to facilitate the operation of major industries, manufacturing units, power plant units and all major forms of transport units. Industrialization, use of transport systems and the pollution caused by the burning of these fossil fuels have resulted in some major climate change and sudden change in the weather pattern which is faced by every parts of the world. India is now aggressively planning to take a strong leap in the adoption of alternative source of energies where EV seems to be the most promising in the transport segment. India is also looking to another alternatives to reduce its dependability on the non-renewable fuels where EV is (Electric Vehicles) is the most promising and seen as the future of the green and clean mobility especially in the Tourism & Hospitality Industry.

Indian tourism and Hospitality Industry is witnessing a new phase of transformation for the sustainable mobility for its guests who are eco-friendly and more conscious about the nature and environment. Many Eco tourists now a days are aware about the global challenges being faced on the account of global warming and sudden change in the weather pattern (Calabrese, *et.al*, 2019). Hence they strive to reduce their carbon footprint and minimizes their dependency on the regular transport facilities during their journey and prefer electric or battery operated transport facilities. Hotels are also now aiming to change their fleet to electric vehicles because there is a sudden rise in the sustainable mobility in the India tourism and Hospitality industry (Ayer, 2009 & Axsen & Sovacool, 2019). Further Electric vehicles (EVs) and Tourism and Hospitality industry holds a strong potential to contribute to the Indian economy (Adepetu & Keshav, 2017). Taj group of hotels a leading hotel chain is the first company in India which has taken this initiative as a part of their commitment towards sustainability to add EVs and install EV charging stations at their 92 hotels. These initiatives will bring a revolutionary change in the sustainable mobility and the use of EVs and green source of energy. The present study is first of its kind and will focus on how these initiatives will transform the tourism and

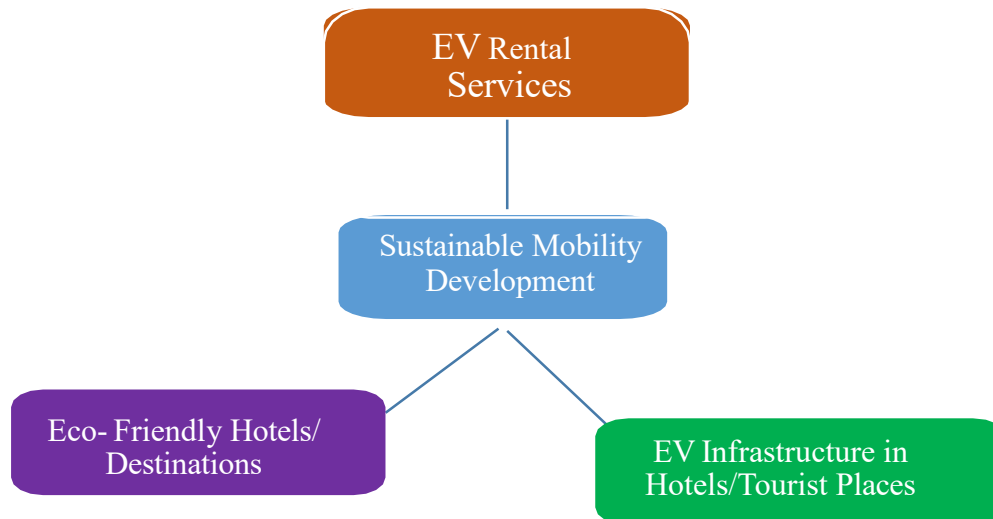
hospitality industry of India and contribute for the greener future.

The current research has attempted to study the sustainable mobility from the perspective of environmental sustainability, overall carbon emission and its reduction, overall energy efficiency, government regulations and new innovations which are taking place in tourism and hospitality industry. Further it was observed that very few or limited research work is conducted on the sustainable mobility and the integrated role of new innovations and electric vehicles in the context of tourism and hospitality industry. Most of the previous studies focused only on automotive industry, new transport systems, urban and rural mobility options but very few or no study was conducted on how sustainable mobility can lead to a sustainable tourist experience and will impact the brand image of the hotel company. Additionally in the Indian context very few or almost no study has been conducted highlighting the adoption and utilization strategies of electric vehicles by the hospitality and tourism players. Hence the present study attempts to bridge these gaps by examining the significance of sustainable mobility in the tourism and hospitality industry. It will further attempt to assess the contribution of EVs in guest satisfaction, sustainable development of the tourist sites, and innovative measures taken by hotels and tourism stakeholders.

Literature Review:-

EVs and Tourism & Hospitality Industry have seen a massive growth in the last few years where the intersection of these two have led to a rapid and sustainable growth in the transport system. In the next few years Indian Tourism & Hospitality Industry is going to witness a huge demand and many new opportunities will open for the hotels and travel companies to meet the demand of eco – friendly travel in India (Garcia, Gomez & Sobrino, 2020). The global push and more awareness towards the environment and sustainability has made EV sector a major focal point for the Indian tourism and hospitality sector (Adepetu & Keshav, 2017). It is expected that EV market in India alone will grow at a rate 47% CAGR (compound annual growth rate) by the end of 2032 (Ayer, 2009) (Akiva, Bierlaire & Steg, 2026). The government of India is also showing some aggressive measure towards adopting the sustainable mobility options and transport system to reduce the carbon emission and commitment towards green future (Cervini, Buraa & Gkritza, 2026). FAME II (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) scheme by government of India is a major step towards this revolutionary change where incentives are provided for the electric vehicles in public transport and also subsidizing the charging infrastructure (Calabrese, *et.al*, 2019). Hotel chains like Taj, ITC, Marriott and even many travel agents and transport companies are availing FAME II scheme launched by the government of India, to join this movement of green transport and

sustainable mobility. Even schemes like National Electric Mobility Mission Plan (NEMMP) has a mission to touch the sale of 6-7 million EVs by the end of 2030. The government of India has also opened its door for 100% FDIs under the automatic and electric vehicles production routes which would attract some big global players to invest in the growing market of India's EV industry (Garcia, Gomez & Sobrino, 2020).



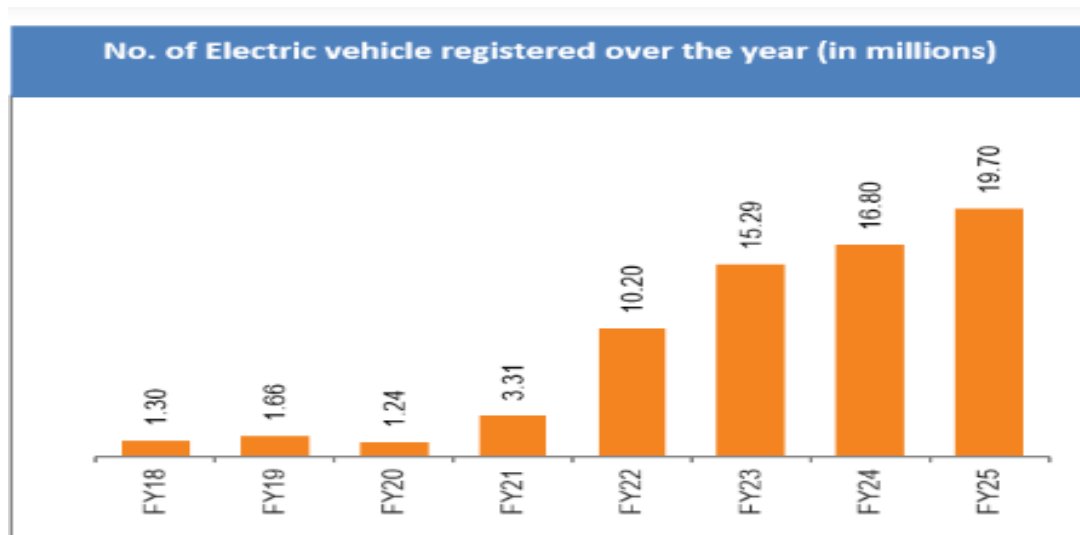
(Figure 1 :- Source:- Self-conceptualized)

EV Industry in India:-

Across the globe the government agencies have started shifting their focus on the green and sustainable transport systems, where the major focus is on reducing the carbon footprint and fighting against the climate change (Cheng, Ran & Wang, 2026). In India post 2014, many new initiatives and policy level decisions have been taken by the government to push EV mission and promote sustainable mobility in the country. The government has a vision to become a global leader in the EV vehicles production and adoption of sustainable mobility across the sector by 2035 (Koroma & Alwosheel, 2026). The government of India has focused on bringing some major schemes to boost the manufacturing, usage and the export of EV vehicles and to overall achieve a strong EV culture across the country. NITI Aayog the premier policy think tank of the Government of India emphasized more upon the Sustainable mobility options and proposed a detailed future roadmap for the growth and development of EV sector in India and laid down the blueprint of Indian government's vision of 2070 to achieve net zero emission. The NITI Aayog is working on the fundamentals of the sustainable mobility and set a target for each specific types of vehicles to achieve 33% of the EV sales distribution across the different states and Union Territories by 2035. The specification for the EV vehicles and the types of vehicles which NITI

Aayog specified are 30% in Private cars, 70% in Commercial vehicles, 40% in Buses, 80% in two wheelers, 80% for three wheelers and the broader vision is to achieve 100% local production of EVs under 'Make In India' initiative.

India has consistently recorded a substantial increase in the number of the EVs sale and registration from 1.3 million in 2018 to 19.70 million in 2025 which is highly impressive and shows the huge potential of the EVs growth in India in the years to come.

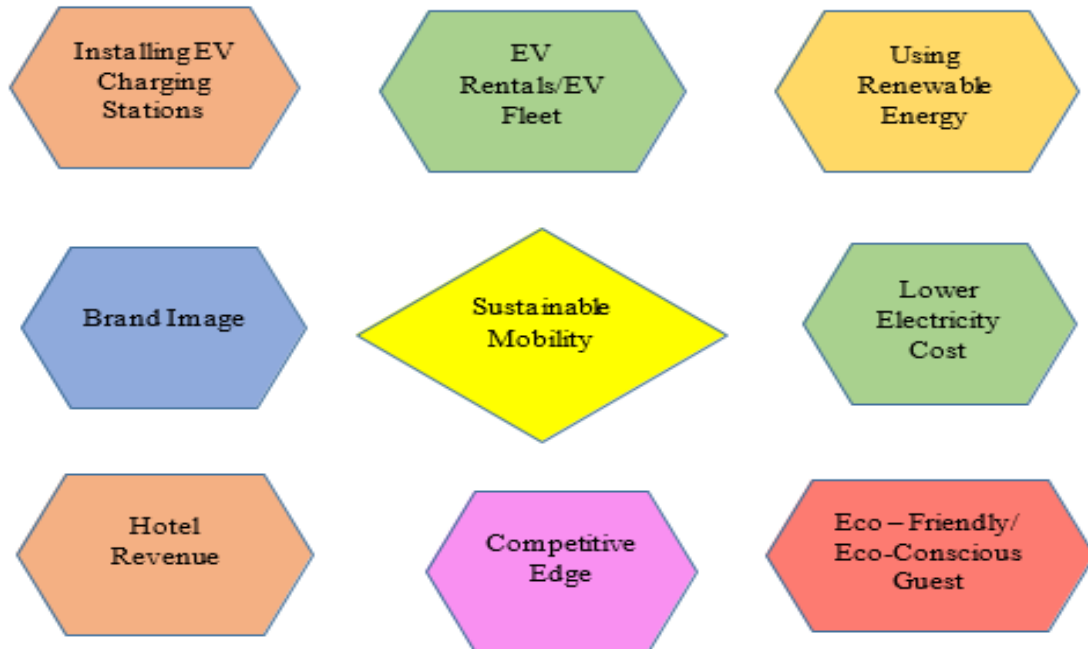


(Source:- PIB Report 2024-25)

EV industry in India is one of the fastest growing transport segment which has further attracted many domestic and international players to be the part of the EV value chain. These MNCs and the major giants in the EV sector usually join for the production of EV vehicles, battery efficiency, new product development, research and development and more focus on making it more affordable and easy to use by the customers. Since EV promises many advantages this also comes with its set challenges, charging stations are one of the major challenge being faced the customers, even the cars are not meant for long drives they usually offer 350-600 km range. The initial cost of EV and its manufacturing unit is highly expensive, plus it also demands a particular set of manpower and expertise which comes at a very expensive rate. Despite all these challenges, the demand for EVs are rising day by day, which has further pushed these MNCs to innovate and bring a sustainable long term solutions for challenges associated with the EVs (Wang, Zhong & Guan, 2026).

Tourism and hospitality industry in India is witnessing a higher demand of EVs and sustainable mobility options especially to attract one particular segment and target market i.e. Eco-conscious guests (Adepetu & Keshav, 2017). Hotels are now experiencing this revolutionary

trend which has further helped the hotels to be more committed towards sustainability and green energy consumption (Calabrese, *et.al*, 2019). Following are the few segments which is helping the hotels and travel companies to highlight their overall commitment towards sustainability and green energy sources:-



(Figure 2:- Source: - Self-conceptualized)

Indian Hotels Company & Its Commitment towards green future:-

Indian Hotels company which is popularly known as Taj Group of Hotels was founded by Jamsetji Tata and opened the first hotel in Mumbai i.e. Taj Mahal Hotel in 1903. Currently IHCL holds a portfolio of 380 plus hotels and around 150 under development and has a strong presence in 4 continents, 14 countries and in over 160 plus locations. Indian Hotels Company is the India's largest hospitality company and is known for its hospitality, services and its overall commitment towards Sustainability. The Paathya initiative by IHCL is a classic example of strong commitment and devotion towards the nature and the community to bring a major positive change with the core values of IHCL and Tata family. The word Paathya usually comes from Sanskrit word which means '*path*' or '*way*' and it represents the holistic approach of IHCL towards the environment, social, and governance i.e. (ESG) practices and was launched in the year 2022. IHCL for many decades has worked towards optimizing and reducing the carbon footprint without compromising on the core values and the commitment towards the guests and

the stakeholders. Around 130 plus hotels of IHCL are Sustainability Certified by the LEED Certification, Earth check and Hotel Sustainability basics which further shows the commitment and the overall initiatives of IHCL towards environment and community. Even Speaking on a particular occasion, Mr. Puneet Chhatwal, Managing Director and Chief Executive Officer, IHCL said, *“Paathya is IHCL’s endeavor to walk a collaborative path towards creating a shared value for all its stakeholders. Embedding ESG at the very heart of our operations will help us tackle the biggest challenges of today and capture the best opportunities of tomorrow.”*



(Source: - IHCL, Sustainability report, 2024)

The present research attempts to present a comprehensive understanding about the sustainable mobility from the perspective of tourism and hospitality industry. It has been observed that in past no research or study has been done on sustainable mobility and the use of EVs in the context of tourism and hospitality industry, even very less literature and theoretical contribution have been made for this topic. The current research attempts to fill the gap which exists in the literature and presents a comprehensive analysis and findings about the Sustainable mobility and the use of EVs in the tourism and hospitality industry.

Research Methodology:-

The present research is purely qualitative in nature and it involved the exploration and interpretation of the new technological concepts related to the green energy and the use of EV's in the tourism and hospitality industry. (Cresswell, 2009) highlighted that qualitative research does not usually focus on the numerical variables, but does involve the identification and analysis of different themes, patterns, concepts, and major factors contributing to the study. For the current research, to gain a first-hand information, the senior leadership team of the Gateway Aurangabad (CSN) was approached and current employees were the main respondents for the research. Many of the respondents refused to disclose their identity as a part of privacy issue, the author is highly sensitive towards these privacy aspects and we completely respected their decision. Semi – structured interviews, Focused Group Discussion (FGD) were conducted, where the General Manager and other executives participated and shared their understanding about the use of EVs in Taj group of hotels. Few employees also shared the perception of guests and their families towards the use of EV vehicles as a mode of transport and their overall experience and feedback for the use of EV vehicles as compared to the non EV vehicles. A total of 55 respondents agreed to participate for the semi – structured interview and five rounds of focused group discussion with a member of six respondents in each session was carried out. However after 54th interview it was observed that the same range of responses were coming from the respondents which led to the saturation of the data and eventually at 55th number we stopped for the semi – structured interviews.

The present research has a wider scope as it attempts to assess the significance of sustainable mobility and the use of EVs by the Taj group of hotels. The current research is confined to the tourism and hospitality sector of India taking Taj group of hotels as a case study. This study will create an awareness and help the hotels and travel companies across the globe to join the revolution of green mission for the sustainable mobility and the use of EVs and green energies for their transport facilities and guest services.

Research Question:-

How does sustainable mobility and the use of EVs at Taj group of hotels under Paathya initiative will reposition the brand's overall commitment towards sustainability.

Objectives of the Study:-

- 1) To study in detail the scope and potential of new sustainable mobility and EV vehicles in the Indian tourism & hospitality industry.

- 2) To examine the impact of sustainable mobility and EV vehicles on the brand image and the commitment of Taj group towards sustainability under Paathya initiative.
- 3) To highlight how the commitment of Taj group towards sustainability and the use of green energy resulted in higher occupancy & revenue growth in the last one decade.

Discussion & Findings:-

The current study has adopted qualitative content analysis method in order to examine the significance of EVs in the Indian tourism and Hospitality Industry by taking IHCL (Indian Hotels Company Limited) as a major case study. Yen (2002) argued that Content analysis is one of the most suitable method in order to assess the policy documentations, climate change reports, sustainability disclosures, policy level orders or any government level communication documents and published works to identify the major themes, emerging patterns and important elements related to the sustainable mobility. The current study follows the single – case study design, taking IHCL as a major player of sustainable mobility, use of EVs in around 92 hotels under Paathya initiative. Some of the major secondary sources which were used to collect the information was through IHCL annual sustainability report, ESG policy documents, websites and press release, these documents gave a major insight about the sustainability initiatives and some major steps taken by the IHCL. The study used deductive and inductive coding, where the deductive coding was guided by the sustainable tourism literature and the inductive coding enabled the new themes to emerge. Further some of the initial coding categories included New Green transportation, Electric vehicles, Charging Infrastructures, ESG framework, Sustainable mobility, reduction in carbon emission, carbon footprints and major green practices followed by the hotels. Content analysis helped in identifying the frequency, significance, and to examine the relationship between the themes which are closely related to the EV adaption and the sustainable mobility. Cohen & Hopkins, (2019) argued that there is a strong shift in the market where every small or a big companies are prioritizing to become carbon neutral, in India even the major business houses have set their target to achieve carbon neutrality by 2050 or 2060. Tourism & Hospitality industry is also making a huge effort towards the decarbonization and there are many initiatives been taken pre COVID and post COVID as well which includes the ban of single use plastic, use of ecofriendly products, and shifting towards more greener alternatives. Many authors even argued that the sustainability initiatives taken by the hospitality service providers play a significant role in travel decision making by the guests travelling to a

particular destination or hotel, even (Adepetu & Keshav, 2017) highlighted about the shift in the Indian travelers who are seeking more of sustainable and eco-friendly travel options. Post COVID some major revolutions occurred where the major domestic and international hotel chains took some tough and highly impactful decisions which will have a long term impact on the environment and the community as a whole. As discussed above many hotels in order to reduce their carbon footprints have completely eliminated the single – use plastic, and opted for environmentally friendly refill options for the soaps and shampoos, sensor taps in the guestrooms, even replacing the commercial cleaning supplies and producing in house bio-enzymes products which includes toothpaste and lip balms for the guests. (Calabrese, *et.al*, 2019) argued that many hotels across the globe are taking some tough and smart decisions of setting up the green and renewable sources of energy for their hotel operations as they have realized the cost saving dynamics of these sustainable resources. International brands like Hiltons, Marriott, Six Senses are heavily dependent upon the renewable source of energy and they use renewable source of energy, reusable water sources, renewable source of energy for the hotel operations, smart energy systems, and zero waste policy to contribute more for the sustainable and green hotel operations for the customer and mother Earth.

EV Infrastructure the Need of an hour:-

EVs are the future of the mobility in the Indian tourism & Hospitality industry. During the interview at Taj Gateway Aurangabad, the General Manager highlighted that there is a major shift being observed in the guests both domestic and international, where the guest always first enquires about the availability of EV vehicles for the local sightseeing and travel to the nearest places. He emphasized more about the need of expanding the EV infrastructure at the Gateway Aurangabad, as the demand is increasing day by day and is also essential from the business competitive point of view. Few employees highlighted their observation where post COVID guests have become more and more eco sensitive, they even enquire sometime about the hotels commitment towards sustainability during their stay and usually prefer to stay with the brand which are highly committed towards mother Earth, and follows the global sustainability norms. They further highlighted that Paathya initiative of IHCL played a major role in showcasing our commitment towards environment and the local community, and soon every hotels will have to invest a good amount of money on their EV infrastructure. During one of the FGD the respondents highlighted the benefits this green revolution in the sustainable mobility segment brings to the hotel. They further highlighted that attracting Eco-Conscious guests and

projecting your brand as an ecofriendly helps in a long term from the business perspective. Taj Gateway is now also considered by many travelers who take long journeys towards down south or towards Delhi and Nagpur as a preferred hopping stop, which contributes for a positive and convenient guest experience. The guests usually stop for charging their vehicles and they also enjoy the food and beverage services offered by the hotel before continuing on their further journey. It has also been observed that the overall commitment of the hotel's brand towards sustainability eventually becomes a unique selling point and it also separates the brand images from the other competitive brands which helps in appealing to a broader clients in the domestic and international market. Few senior managers also highlighted about the strong government support and the incentives being offered by the state and central government schemes. Maharashtra government offers wide range of incentives under Electric Vehicle Policy 2025-2030 to promote EV adoption, some of the major elements which are covered under this policy is EV purchase subsidies, tax exemptions and the development of EV infrastructure for the hotel's delivery fleets, EV shuttles, van and guest cars. These strong support from the government would definitely give boost to the hotel and tourism sector and would bring a major revolution in the field of sustainable mobility and EV vehicles sectors. Further training and offering the skill development programs in Maharashtra and other states in India will strengthen the manpower requirement in the future to empower youth with the required skill sets in EV vehicle sector.

EV and its major implications on the Hotel Business:-

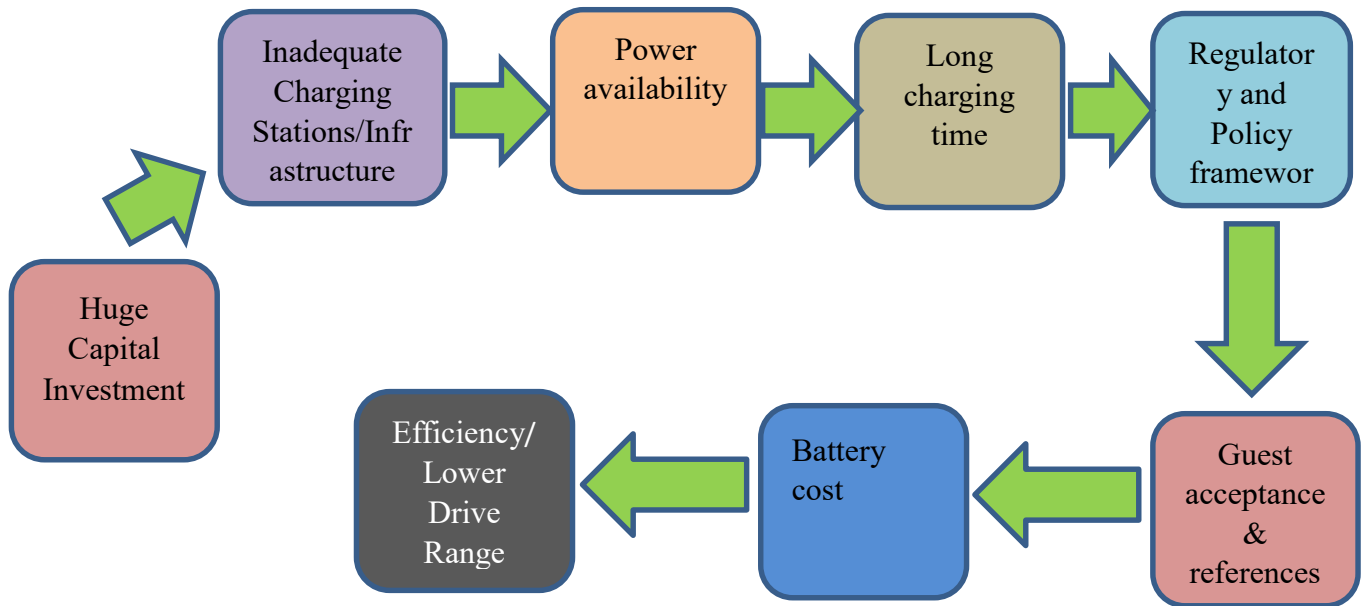
The current research presents a major implications of the sustainable mobility and EV vehicles for the transport segment in the Tourism & Hospitality industry. Our analysis clearly highlights the sustainable initiatives taken by IHCL, doesn't only highlight about the company's CSR (corporate social initiatives) rather it also highlights about the brand image, and additional revenues which are earned by the hotel. During the interview the General Manager of the Taj argued that how Aurangabad being the tourism capital of Maharashtra can be an ideal destination where all the tourism stakeholders can join the hands together to promote the EV culture which will project Aurangabad as a benchmark in the tourism and hospitality fraternity. It was observed that IHCL has entered into a partnership with its own parent company TATA Power to seek their expertise in setting up the EV infrastructure at all the major Taj properties. TATA Power is a major brand which is involved in building the new EV ecosystem in India, and the main goal of TATA power is to make India a major leader in the field of EV segment.

EZ Charge is a flagship EV charging station network brand started by the TATA power, and is involved in end to end charging solutions and support system in India. IHCL & TATA Power together can bring some major revolutions in the EV vehicles industry especially for the Tourism & Hospitality sector. Senior managers rightly pointed out that many in house and non-resident guests prefer TATA power charging stations as compared to any other company general charging stations because of the trust on the TATA brand & IHCL brand, where they also get to try the local cuisine and warm hospitality while their car is getting charged. No doubt now almost all the hotel brands have realized the significance of EV vehicles and slowly upgrading their fleet and becoming more sustainable in their operational and functional aspects for running the hotel.

EV benefits and challenges for the industry and environment:-

In the last few years the global transport market has witnessed a sharp increase in the EV vehicles because of its several benefits towards the environment, social, community and the sectors which are involved for the global business. Senior managers at Taj Gateway highlighted about the different benefits which they have encountered ever since their hotel or they themselves starting using EV vehicles. EV vehicles result in a reduced air pollution as the major source of energy used is clean energy which is much cleaner as compared to the petrol and diesel energy sources. The General Manager of Taj Gateway also highlighted about one major aspect i.e. the concern about the source of electricity and the emissions which are generated near the power plant which is located in a particular city or small town. It is important to note that if we use the fossil fuels to generate electricity for supporting our EV charging infrastructures then it's not a wise decision, as it will eventually impact the local climate and the community. However, the attempt should be made to generate the electricity for EV charging infrastructures through renewable source of energy which would lead to zero emission for both EV vehicles usage and the local area which generates the power for supporting the EV charging infrastructures. As per IEA, 2019 report (International Energy Agency) EV vehicles offer higher degree of efficiency which is approx five to six times higher energy efficient than the conventional vehicles. In the near future EV would transform the transportation sector of India offering improved energy security which would eventually reduce the India's dependency on the imports of oil & gas from other countries. During one of the FGD, few employees highlighted about the noise reduction, offered by EV vehicles as compared to the conventional vehicles. This would be an incredible revolution in terms of reducing the Noise pollution especially for the urban cities which facing noise pollution during the peak hours. They further

discussed about the significance of batteries in the EV vehicles, where battery play a key role and if we are targeting for the mass production and adoption of EV vehicles a major technological revolution is required for cost-effective and highly efficient technological upgrade in the battery systems. The innovative transformations in the EV sector must be aligned with the SDG goals (Sustainable Development Goals), listed by the United Nations. Its highly essential that these innovations in the field of sustainable mobility must help in achieving the sustainability goals which are directly linked with the overall mission & vision of the United Nations. First and foremost goal 3 of the SDG i.e. (Good health and wellbeing) must be achieved, Goal 7 (Affordable & Clean energy), it must be affordable for everyone to buy based on clean energy source, and Goal 13 (Climate action) where positive and efficient steps are required for aligning the sustainable goals with the mission of United Nations. Hence EVs can play a major role in achieving a sustainable mobility goals, transforming the transport industry across the different countries in the world. As we have discussed mostly about the benefits and positive aspects of EV, there are still few major aspects which need major attention and development. Furthermore, the main aim of adopting the electric vehicles in the tourism and hospitality industry is to reduce the carbon footprints and to reduce the dependency upon non-renewable sources of energy. Many hotel chains in India have already started taking some major steps in this direction and IHCL is one of the main player in the race of sustainable mobility. However there still exist some major constrains related to the cost factor, technological factor, operational aspects, government level policy frameworks, infrastructure development and last but not the least the cost factor. Some of the major challenges and the risk factors are depicted below.



(Figure 3:- Self Conceptualized)

Overall we can see that there still a gap in terms of technological upgrade and more effort is required to bring EV vehicles into the full main stream transport systems. However with the recent pace and with the major technological innovations in the field of EVs and batteries, we may witness some major breakthrough in the electric vehicle segment which would change the face of entire transport industry across the globe.

Conclusion:-

Indian tourism and hospitality industry is on the verge of revolutionizing the sustainable mobility and the use of EV vehicles will rise in the years to come. The automobile industry of India is going through a major shift and it's the right time to leverage its domestic market which is huge in terms of capacity and entering into new partnership and joint venture with EV leaders from the world can help India to build its own independent EV leadership. In many parts of the world it has been observed that use of EV vehicles has reduced the pollutants, different volatile organic compounds, noise pollution and carbon monoxide which ultimately contributes in increasing the air quality. Nodoubt the integration of the EV vehicles, EV charging stations and the EV fleets is a win – win game for the hotels especially in the domestic segment of Tourism & Hospitality Industry of India. These major initiatives help in repositioning the overall brand image of the hotel company at the global level. Further the hotels join the global race of sustainability measures and at the same time it also exceeds the

guest's experience and attracts eco sensitive guests to the hotel brand. Here one must not forget the revenue aspect which is the most significant factor for the operation of any hotel chains, these sustainable mobility initiatives further add the potential revenue opportunities for the hotel chains. Hotels will focus more on EV vehicles to highlight their commitment towards the sustainability and their role in reducing the carbon foot prints which eventually will attract a particular segment of customers. Taj group has already made a huge investment and planning to increase their overall participation and commitment towards sustainability by opening more eco-friendly hotels and the use of EV and battery operated vehicles for their guests. Taj group has a mission to offer a greener and more sustainable travel experience to their guests which will cater to the need of eco-conscious guests and their overall commitment towards sustainability and green future.

The findings of the study highlights that the adoption of (EVs) in the IHCL hotels have also contributed positively for the overall image of the brand, responsible guest preferences, commitment to the ESG framework. However the degree of the involvement and the commitment varies from the different hotel brands to the specific hotels considering the operational, financial and functional aspects into the consideration. It was found that the IHCL hotels which were offering EV charging facilities, green mobility services and support from the each hotel unit for sustainability attracted more of eco-sensitive guests from domestic and international market. EV adoption was also seen as a major factor in contributing for the higher degree of occupancy percentage, increased length of stay, higher range of preferences for the hotels and the impact on the overall demand of the customers. It was also observed that customer satisfaction of the IHCL guests were positively influenced by the EV facilitates, eco-friendly measures and overall commitment towards the environment. The study closely observed from the financial perspective where it was found that EV investments are long term planned investments, where the return comes only with the passage of time, no immediate return should be expected out of the EV sector. IHCL has witnessed a higher degree of financial gains where the fuel costs went down substantially, lower operating cost of EVs at the hotel properties, higher range of operational efficiency for each hotel unit, and higher commitment to the environmental sustainability. Hence we can conclude by highlighting that as the customer expectations are growing, more financial implications are also growing, however the EV sector still demands more investment in the EV infrastructure, improved battery efficiency, higher drive range, and many more innovative measures and future sustainable solutions to be a market leader in the sustainable mobility sector.

References:-

- Adepetu, A. and Keshav, S. (2017), "The relative importance of price and driving range on electric vehicle adoption: Los Angeles case study", *Transportation*, Vol. 44 No. 2, pp. 353-373.
- Aguilera-Garcia, A., Gomez, J. and Sobrino, N. (2020), "Exploring the adoption of moped scooter sharing systems in Spanish urban areas", *Cities*, Vol. 96, p. 102424.
- Al-Aomar, R. and Hussain, M. (2017), "An assessment of green practices in a hotel supply chain: a study of UAE hotels", *Journal of Hospitality and Tourism Management*, Vol. 32, pp. 71-81.
- Asadi, S., Pourhashemi, S.O., Nilashi, M., Abdullah, R., Samad, S., Yadegaridehkordi, E., Aljojo, N. and Razali, N.S. (2020), "Investigating influence of green innovation on sustainability performance: a case on Malaysian hotel industry", *Journal of Cleaner Production*, Vol. 258, p. 120860.
- Axsen, J. and Sovacool, B.K. (2019), "The roles of users in electric, shared and automated mobility transitions", *Transportation Research Part D: Transport and Environment*, Vol. 71 No. 1, pp. 1-21
- Ayre, J. (2016), Top-Selling Car in Norway Is an Electric SUV, EVs 5 29% of Sales, available at: <https://cleantechnica.com/2016/06/13/top-selling-car-norway-electric-suv-evs-29-sales/>.
- BCG, Google (2017). Demystifying the Indian Online Traveller. Retrieved from: <https://media-publications.Bcg.com/BCG-Google-Demystifying-the-Indian-online-traveler-Jun-2017.pdf>.
- Ben-Akiva, M., Bierlaire, M., & Steg, L. (2026). The behavioral dimension of transport decarbonization. *npj Sustainable Mobility and Transport*.
- Bloomberg, N.E.F. (2018), Electric Vehicle Outlook 2018, Bloomberg New Energy Finance.
- Bleier, A, Harmeling, C. M., & Palmatier, R. W. (2019). Creating Effective Online Customer Experiences. *Journal of Marketing*, 83(2), 98–119.
- Calabrese, A., Costa, R., Levialdi, N. and Menichini, T. (2019), "Integrating sustainability into strategic decision-making: a fuzzy AHP method for the selection of relevant sustainability issues", *Technological Forecasting and Social Change*, Vol. 139, pp. 155-168.
- Cervini, G., Burra, L. T., & Gkritza, K. (2026). The impact of temperature on battery electric

vehicle penetration. *npj Sustainable Mobility and Transport*.

Cheng, X., Ran, Y., & Wang, T. (2026). Replacement of internal combustion engine vehicles by electric vehicles in Chinese ridesharing markets. *npj Sustainable Mobility and Transport*.

Cohen, S. A., & Hopkins, D. (2019). Autonomous vehicles and the future of urban tourism. *Annals of Tourism Research*, 74, 33-42. doi:10.1016/j.annals.2018.10.009

EHL (2022), what will the Hospitality Industry Look like in 2030? EHL group, Switzerland, available at: <https://hospitalityinsights.ehl.edu/hospitality-industry-2030> (accessed 12 January 2025)

Geossling, S. and Lund-Durlacher, D. (2021), "Tourist accommodation, climate change and mitigation: an assessment for Austria", *Journal of Outdoor Recreation and Tourism*, Vol. 34, p. 100367

Graci, S. and Dodds, R. (2008), "Why go green? The business case for environmental commitment in the Canadian hotel industry", *Anatolia*, Vol. 19 No. 2, pp. 251-270

Han, H., Hsu, L.T.J. and Sheu, C. (2010), "Application of the theory of planned behavior to green hotel choice: testing the effect of environmental friendly activities", *Tourism Management*, Vol. 31 No. 3, pp. 325-334.

Jones, P., Hillier, D. and Comfort, D. (2014), "Sustainability in the global hotel industry", *International Journal of Contemporary Hospitality Management*, Vol. 26 No. 1, pp. 5-17, doi: 10.1108/IJCHM-10-2012-0180.

Karunakar, B. (2016). Changing Paradigms in the Taxi Industry in India. *ACADEMICIA: An International Multidisciplinary Research Journal*, 6(5), 93–133.

Koroma, M. S., & Alwosheel, A. (2026). Aligning vehicle electrification with power sector transitions: Life cycle insights across diverse grids. *npj Sustainable Mobility and Transport*, 3,. <https://doi.org/10.1038/s44333-025-00076-y>

Kuffer, F., & Brecht, L. (2012). Managing Product Variety Decisions for Sustainable Profitability in B2B Industries. *International Journal of Technology Marketing*, 7(3), 287–305

MacInnes, I. (2005). Dynamic Business Model Framework for Emerging Technologies. *International Journal of Services Technology and Management*, 6(1), 3–19.

Page, S, & Ge, Y. (2009). Transportation and Tourism: A symbiotic relationship? In Jamal, T.

& Robinson, M. (Eds.). *The Sage handbook of tourism studies*. London: Sage.

Ramgade, A., & Kumar, A. (2021). Changing Trends of Hospitality Industry: Emergence of Millennials and Gen Z as Future Customers and their Influence on the Hospitality Industry. *Vidyabharati International Interdisciplinary Research Journal*, 12(01), 336-342.

Ramgade, A., & Kumar, A. (2021). Futuristic Hotels: A Study on Evolution and Growth of Smart Hotels. *Vidyabharati International Interdisciplinary Research Journal*, 12(02), 117-120.

Wang, R., Zhong, C., & Guan, S. (2026). Recent developments of automated vehicles and local policy implications. *npj Sustainable Mobility and Transport*.