NON FISCAL INCENTIVES TO ACCELERATE EV ADOPTION

Recommendations for Telangana

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I. INTRODUCTION

Telangana has been making strong strides to promote the adoption of electric vehicles and build a robust e-mobility ecosystem. Its policy, launched in October 2020, aims to support the uptake of EVs through time-bound fiscal incentives as well as support the creation of EV charging infrastructure. In 2023, the state also announced India's first dedicated mobility cluster, Telangana EV Valley, with the aim of attracting investments worth INR 50,000 Crores and creating 4 lakh jobs by 2030. In terms of sales, Telangana stands at 8th position among all states, with more than 1.66 lakh EVs sold as of September 2023. For the state to continue accelerating EV sales, policy support will play a key role. EVs in India are only just becoming mainstream and their higher cost compared to ICE vehicles is still a significant barrier to their adoption.

India has created an enabling policy landscape at the state and national level to promote the sale and manufacturing of EVs, as well as build a robust charging network. Many state policies offer a range of fiscal and non-fiscal incentives to bring down the financial burden of EVs and encourage their adoption. While fiscal incentives such as subsidies and tax rebates have traditionally been at the forefront of EV promotion, in the face of limited budgets, states are increasingly looking at non fiscal benefits to accelerate EV adoption.

Non fiscal benefits are those that do not have an easily quantified monetary benefit, but through preferential treatment to EVs, they can encourage their adoption. Some examples include creation of green zones in cities where only zero-emission transport is allowed, reserved parking for EVs, and growing charging infrastructure through initiatives like modification in building codes, single window clearance for EV manufacturers etc. These can continue long term through policies and programmes, and play a crucial role in shaping the perception of EVs and enhancing their practical use in daily life.

This report outlines the various non fiscal incentives that Telangana could consider adopting through its EV policy and programmes to accelerate EV adoption. These have been identified by analysing all state EV policies currently operational in India, along with global best practices followed in countries such as China. In order to bring industry perspective on this issue, we also organized a closed-door virtual roundtable with industry players representing Telangana based OEMs, charging and battery swapping companies, to understand which non fiscal incentives would have the highest impact on EV sales and consumer mindset. This report also includes recommendations from this roundtable on the most effective non fiscal incentives.

II. STATE LEVEL NON-FISCAL INCENTIVES IN INDIA

There are 29 active state EV policies in India which offer both demand and supply side incentives to accelerate EV sales and manufacturing, create robust charging networks and overall build a strong EV ecosystem. The figure and table below highlight the type of non-fiscal incentives included in various state EV policies.

Exemption from taxes like road, registration and toll

Parking fee waivers

Reserved parking

Exempt from odd-even rule

Reimbursement of SGST

Interest free loan/interest subvention

Modification in building code

Green/zero emission zones

Single window clearance/support in charging infrastructure

Annual permit fee waiver for EVs

ZEV Credit mechanism

- As the table below shows, of the 29 state EV policies, **21 states offer some form of non-fiscal** incentive.
- More than **10 states have included modification in building codes** as a point in their EV policies. This includes Andhra Pradesh, Chhattisgarh, Delhi, Goa, Haryana, Karnataka, Madhya Pradesh, Punjab, Rajasthan and Tamil Nadu. This is the **most popular non-fiscal incentive** included by states.
- Seven states have included the **establishment of green or zero emission zones**. These include Andhra Pradesh, Himachal Pradesh, Haryana, Kerala, Madhya Pradesh, Maharashtra, and West Bengal.
- Six states have **exempted road tax for electric vehicles** - Andhra Pradesh, Himachal Pradesh, Jharkhand, Karnataka and Madhya Pradesh.
- Kerala has included the highest number of non-fiscal incentives at six.

Table 1: Non fiscal incentives offered in current state EV policies

States	Registration Tax	Road Tax	Toll Tax	Parking Fees	Reserved parking	Reimbursement of SGST	Modification of Building codes & Mandates	Interest free Loans /Interest subvention	Annual Permit fee waive off for CV	Establishing Zero emissions zones /green zones	Support in establishing charging infra	Odd and even rule	ZEV credits mechanisms
Andhra Pradesh													
Assam			50% Rebate										
Bihar													
Chhattisgarh				50% subsidized Fees		3w Cargo							
Delhi													
Goa													
Haryana						Vehicles Manufactured in state		State Govt employees only					
Himachal Pradesh													
Jharkhand								State Govt employees only					
Karnataka													
Kerala		50%											
Ladakh													
Madhya Pradesh		only 1%											
Maharashtra													
Manipur													
Meghalaya													
Odisha													
Punjab													
Rajasthan													
Tamil Nadu													
West Bengal													

III. RECOMMENDATIONS FOR NON-FISCAL INCENTIVES

We conducted an online survey among 22 industry players representing EV manufacturers, charging infrastructure companies and battery swapping businesses. They were asked to rate the eleven non-fiscal incentives offered by states on which they feel would be highly likely, likely, and least likely to accelerate EV sales. Following the survey, we organized a deeper discussion among 18 companies to understand their reasons for rating some options higher than others. Based on the survey and discussion, below are the non-fiscal incentives most likely to accelerate EV adoption.

The following non fiscal incentives received the maximum votes for highly likely to encourage EV sales:

1. MODIFICATION IN BUILDING CODES IN ALLOW CHARGING INFRASTRUCTURE INSTALLATIONS:

Modifying building codes to mandate the inclusion of EV charging infrastructure can significantly boost EV adoption. By requiring new construction to be "EV-ready," it simplifies the process of installing charging points or stations, making it convenient and cost-effective for property owners and increasing access to charging in residential and commercial settings. EV-friendly building codes also enhance property appeal, attracting businesses and residents who own or plan to own EVs. In India, the Ministry of Housing and Urban Affairs amended its Model Building Bye-Laws from 2016, in February 2019, to set rules for the provision of EV charging infrastructure in buildings. The amendment adds the following clause: *"Based on the occupancy pattern and the total parking provisions in the premises of the various building types, charging infrastructures shall be provided only for EVs, which is currently assumed to be 20% of all 'vehicle holding capacity'/'parking capacity' at the premise."*

Industry Feeback: During the roundtable discussion, many industry players expressed the need for guidelines to enforce the building code modification, as well as modify the contracts of the builders to account for sanctioning the necessary load needed to set up charging infrastructure in these new buildings. They also stressed the need for clear guidelines for existing property owners, RWAs and gated communities to ensure proper implementation of charging infrastructure, as the building modification code applies to new construction only. Given that it is unanimously agreed that adequate and conveniently placed charging infrastructure is a prerequisite for EVs, this is the single most important need of the hour. Many cities like Bengaluru, Pune, Chennai face issues particularly in residential complexes for charging requirements.

2. SINGLE WINDOW CLEARANCE:

Streamlining the process for obtaining a No Objection Certificate (NOC) to install charging stations in parking spaces and offering preferential sanctioned load for charging infrastructure can significantly boost the adoption of electric vehicles. Simplifying the NOC procedure reduces administrative barriers and costs, thereby encouraging property owners and businesses to install charging stations more readily. This leads to a more extensive and accessible network of charging stations, making it easier for potential EV owners to find convenient charging options, ultimately reducing "range anxiety" and making EVs more appealing.

Moreover, providing preferential sanctioned load ensures sufficient electricity supply to support multiple charging stations, reducing wait times for EV users and promoting confidence in the EV market. These measures signal government support for electric mobility, attracting further investment from automakers, charging infrastructure providers, and investors. Overall, these changes facilitate the rapid expansion of charging infrastructure, making EV ownership more convenient and attractive, and contributing to the broader adoption of electric vehicles.

Industry feedback: Charge point operators who attended the roundtable expressed a concern around lack of clarity between various government departments and the power department when they are looking for LT and HT (Category 9 type) connections. Introducing single window clearance for charging infrastructure will hugely reduce the time taken to understand processes and wade through the bureaucracy. Also, having clear and standardized guidelines under a single window programme will be very beneficial for builders and residential societies in particular.

3. INTEREST FREE LOANS AND INTEREST SUBVENTION

Providing 100% interest-free advances or loans for the first purchase of electric vehicles, exclusively to government employees in a state, is a compelling initiative to drive EV adoption. This makes EVs financially accessible to a significant segment of the population, particularly government officials, who often serve as community influencers and can set a positive example. It demonstrates the government's commitment to reducing emissions, combating climate change, and fostering sustainable mobility solutions. States like Jharkhand are offering 100% interest free advance/loan on the purchase of first Electric Vehicle (2-wheeler and 4-wheeler) to only Government employees. Haryana has 100% interest free loans to the State Government employees for purchase of EVs. This can be extended to the private sector as well if a policy advocates for it.

Further, financing support through interest subvention is a strategic tool wherein state governments subsidize the interest rates on loans or financing arrangements associated with EVs. This reduces the cost of borrowing for individuals and businesses seeking to purchase EVs or invest in EV infrastructure. Lower interest rates translate to more affordable monthly payments and overall financing expenses, making EVs financially accessible to a broader range of consumers. The affordability directly incentivizes EV ownership. Potential buyers who may have been deterred by the higher upfront costs of EVs are more likely to embrace electric mobility when they see reduced financing expenses.

Industry feedback: Participants highlighted that the biggest success in interest subvention is from SIDBI under which the cheapest interest loans are being provided to electric three wheelers to support a faster transition in this category. This, along with other factors, is showing results, with electric three wheelers having achieved nearly 50% penetration in the Indian market. States like Delhi and Bihar have come up with interstate subvention schemes which have been extended by private banks to the gig economy worker for purchase and shift to EVs.

4. REIMBURSEMENT OF STATE GST

Reimbursing the State Goods and Services Tax (SGST) for businesses involved in electric vehicle services, such as leasing EV fleets, operating EVs, and providing charging or re-fuelling infrastructure, can accelerate EV adoption by building a conducive external ecosystem. It lowers operational costs for businesses, making EV-related services more affordable, thereby investing and expanding the EV sector. This growth means more availability of EV fleets and charging infrastructure, addressing one of the primary barriers to EV adoption – accessibility to charging stations. This also showcases the government's commitment to electric mobility, instilling confidence in EV technology among businesses and consumers. States like Andhra Pradesh are helping the service provider to have the reimbursement of SGST for the services rendered.

Industry feedback: Participants strongly emphasized the need for clear and unambiguous operational guidelines and standards regarding the reimbursement of SGST (State Goods and Services Tax). Specifically, there is a pressing need for clarity on whether SGST can be reimbursed against product sales or against the mobility-as-a-service sector, which includes vehicle rentals. This lack of clarity creates uncertainties that can hinder the widespread adoption of electric vehicles and negatively impact both consumers and service operators in the EV sector in terms of increasing the operations cost.

The following non-fiscal incentives received the second highest votes for highly likely to encourage EV sales:

5. CREATION OF GREEN ZONES

Green zones refer to specific areas or zones within cities or regions that are designed to promote environmentally friendly transportation, including electric mobility. These zones are typically established to reduce air pollution, noise levels, and carbon emissions while encouraging the use of cleaner and more sustainable forms of transportation, such as non-motorized vehicles and electric vehicles. States like Haryana, Maharashtra, Andhra Pradesh, Karnataka, Madhya Pradesh, Punjab & West Bengal are focusing on creating Green zones which will now allow only EVs to enter.

Industry feedback: Participants quoted examples of trials carried out by builders such as Raheja, Phoenix and some corporate offices in specific cities. Here, implementation of zero emission zones have encouraged the use of non-motorized transport or electric vehicles only, particularly two and three wheelers.

6. PHASE WISE REDUCTION IN TAX EXEMPTIONS (ROAD, REGISTRATION AND TOLL)

This is the most popular way of reducing up front cost of EVs and encouraging their adoption. However, since this cannot always be continued for long periods of time, policies may consider a phase wise reduction in tax exemptions such as road, registration and toll. This phased approach rewards early adopters with greater cost savings, thereby driving early uptake. As the EV market grows due to reduced taxes, it attracts investments and expands vehicle options available.

Industry feedback: Participants highlighted a critical issue affecting the EV market - the discontinuation of tax exemptions when they reach a certain limit. This creates uncertainty for both consumers and manufacturers, thereby impacting sales, especially in the 4-wheel segment. Introducing a sunset clause for tax exemptions means setting a clear timeframe during which these exemptions are valid. This provides predictability and helps manufacturers and consumers plan better. With such clarity, stakeholders can make informed decisions and investments, ultimately promoting the growth of the EV market by reducing uncertainties and supporting long-term sustainability.

7. ZEV CREDIT MECHANISM FOR MANUFACTURERS

Such mechanisms provide financial incentives to automakers for producing EVs and encourage higher production rates. Manufacturers earn ZEV credits for each EV they produce, which can be sold or used to meet regulatory EV sales targets. This ensures compliance with government mandates, propelling the shift toward electric mobility. ZEV credit programs also promote market expansion by diversifying the range of available EV models, catering to varied consumer preferences. Competition among manufacturers to earn more credits drives innovation in EV technology, enhancing performance and features. Additionally, these programs help reduce carbon emissions by incentivizing the production and sale of cleaner vehicles.

IV. OTHER NON-FISCAL INCENTIVES

Some other non-fiscal incentives that were discussed and considered likely to accelerate EV adoption include the following:

1. BATTERY BUY BACK GUARANTEE

A government-sponsored battery buy-back program for electric vehicles can be a powerful tool to boost EV adoption and repurpose used batteries for renewable energy storage. This initiative offers financial incentives for EV owners, reducing the overall cost of EV ownership and increasing the resale value of their vehicles. It also promotes environmental sustainability by encouraging the proper recycling of used EV batteries. The repurposing of retired EV batteries for energy storage is a key aspect of this program. These batteries can store excess renewable energy, such as solar and wind power, and release it during peak demand or when renewable sources are inactive. This helps stabilize the grid, reduce reliance on fossil fuels, and enhance energy sustainability. Additionally, used EV batteries can contribute to grid stability by providing ancillary services and emergency power backup.

Industry feedback: Participants stresses on the need for a well-structured state policy as part of the upcoming five year plan initiated by state governments. This policy should be divided into two pivotal phases: an initial phase dedicated to boosting electric vehicle (EV) adoption and a subsequent phase focused on establishing a battery buyback mechanism. Under this proposed buyback mechanism, consumers may initially receive a lower sum for their old batteries in comparison to road tax registration

The implementation of a battery buyback program is critical to address adoption challenges, given the limited lifespan of two wheeler batteries. Developing this program, with support from both manufacturers and the government, using data generated by batteries can significantly reduce total cost of ownership for fleet operators at the end of a battery's life. This innovative approach aligns with the interests of financing institutions and enhances market dynamics. Initiatives like selling vehicles without batteries, exemplified by Bounce, offer a solution where fleet owners can bypass concerns about battery technology, resale, and buyback, thereby fostering a more sustainable EV ecosystem.

2. EXEMPTION FROM OFF-EVEN SCHEME

This is designed to reduce air pollution by limiting the days vehicles can be on the road based on their license plate numbers. This approach has been implemented in several cities worldwide. Beijing was an early adopter of this policy, and they exempted electric vehicles from this regulation, as they are considered more environmentally friendly. Paris also employed the odd-even rule for private vehicles, granting exemptions to EVs, hybrid vehicles, natural gas vehicles, and carpool vehicles with three or more passengers. This initiative resulted in notable air quality improvements, including a 20% reduction in air pollution during rush hours in 2014 and significant reductions in nitrogen oxide emissions along major roads. In India, Delhi briefly introduced a traffic rationing initiative in November 2019, allowing vehicles with odd and even-numbered license plates to operate on alternate days. EVs were exempt from this rule due to their minimal contribution to congestion and pollution. With air pollution from vehicular emissions becoming an increasing concern, many cities may resort to such restrictive programmes. Therefore, exemption for EVs for such rules can result in an increase in their adoption.

3. INFORMATION, EDUCATION AND COMMUNICATON INITIATIVES

E-mobility is still in its nascent stages in India. And given that this is a new technology, there are still many apprehensions and myths in the consumers mind about EVs. A number of very effective campaigns and communication initiatives have been launched in India to address these apprehensions and communicate the benefits of EVs, for the consumer and for the environment.

Delhi government's flagship Switch Delhi campaign has played a key role in accelerating EV adoption in the city, which shows in the EV sales figures. The Shoonya initiative, run by NITI Aayog and RMI India, is encouraging the use of EVs among urban delivery and ride hailing services at a national level. Almost every well known e-commerce and food delivery service and cab aggregators have committed to the campaign and are rapidly transitioning their fleets to electric. Such initiatives play a vital role in building a movement and momentum towards change. States should include awareness campaigns and IEC initiatives in their policy.

ANNEXURES

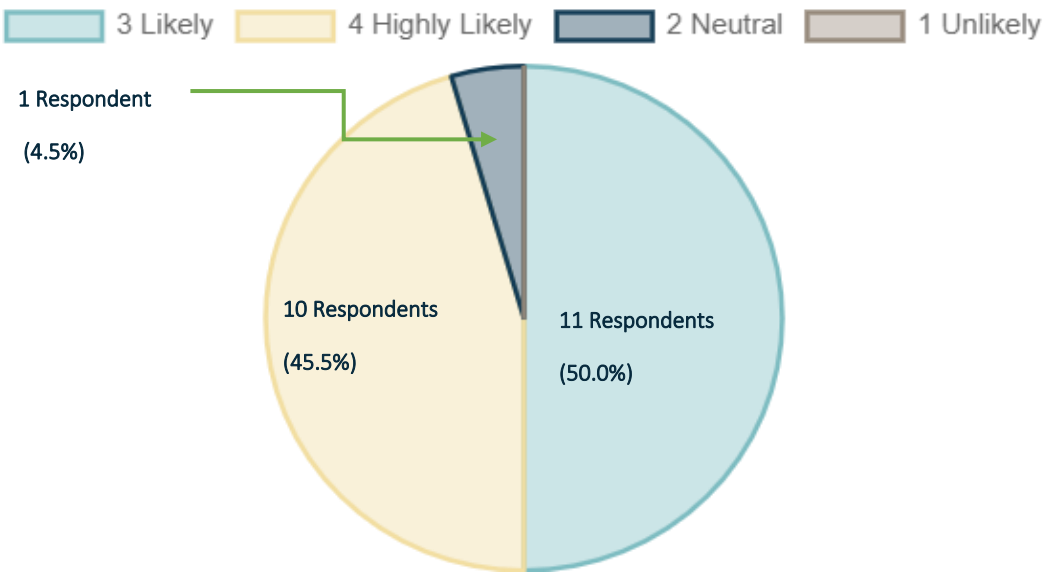
Companies that attended the online roundtable

S. No.	Organisations	Segment
1	ASCI	CSO/Think tank
2	IEEFA	CSO/Think Tank
3	Cygni energy	Battery swapping and manufacturing
4	Tata Power	Charging Infrastructure
5	Charge miles	Charging Infrastructure
6	Gentari Group	Fleet
7	Transco India	Charging Infrastructure
8	Ather Energy	Charging Infrastructure & 2W OEM
9	Brisk EV	2W OEM
10	Virtus Motors	2W OEM
11	Vegh Automobiles	2W OEM
12	RACEnergy	3W OEM & Battery swapping
13	NLS	Academia
14	Hala Mobility	Fleet
15	Nexigo energy	Battery Manufacturing
16	Murugappa Group	OEM
17	Neuron Energy	Battery Manufacturing
18	Persist Energy	2W OEM

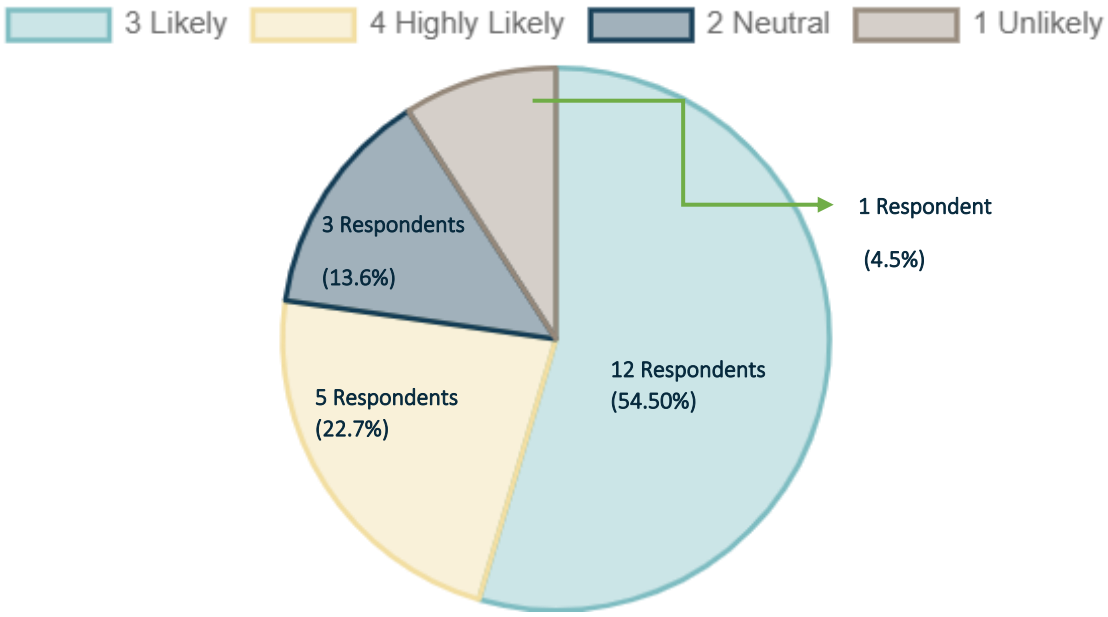
SURVEY RESULTS

Twenty two companies participated in this survey, which brought out of the following results:

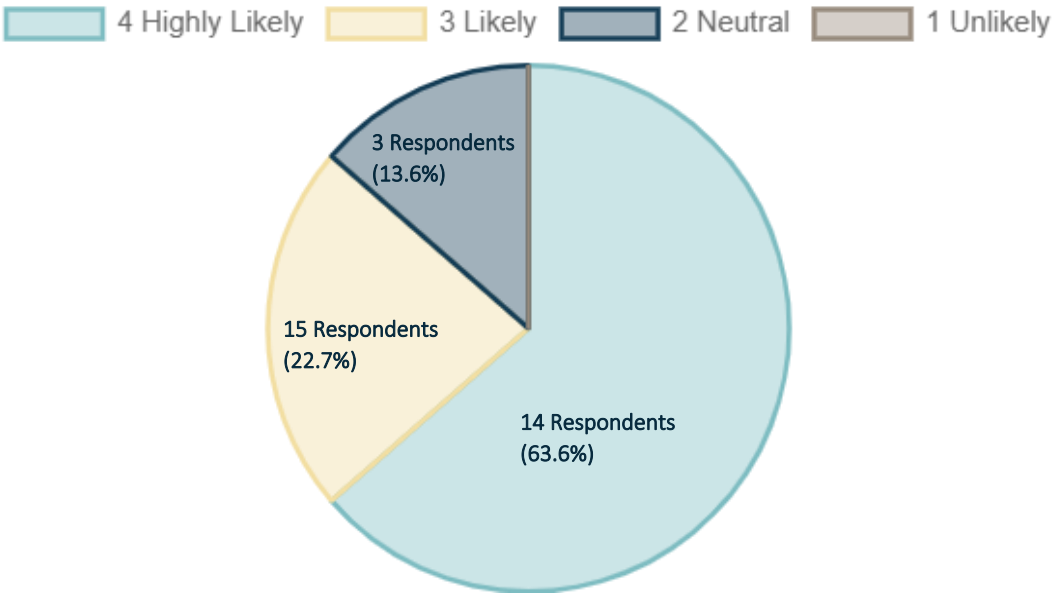
1. Will the implementation of Green Zones encourage the adoption of electric vehicles? Green zones are specific areas within cities or regions that only allow zero emission transportation.



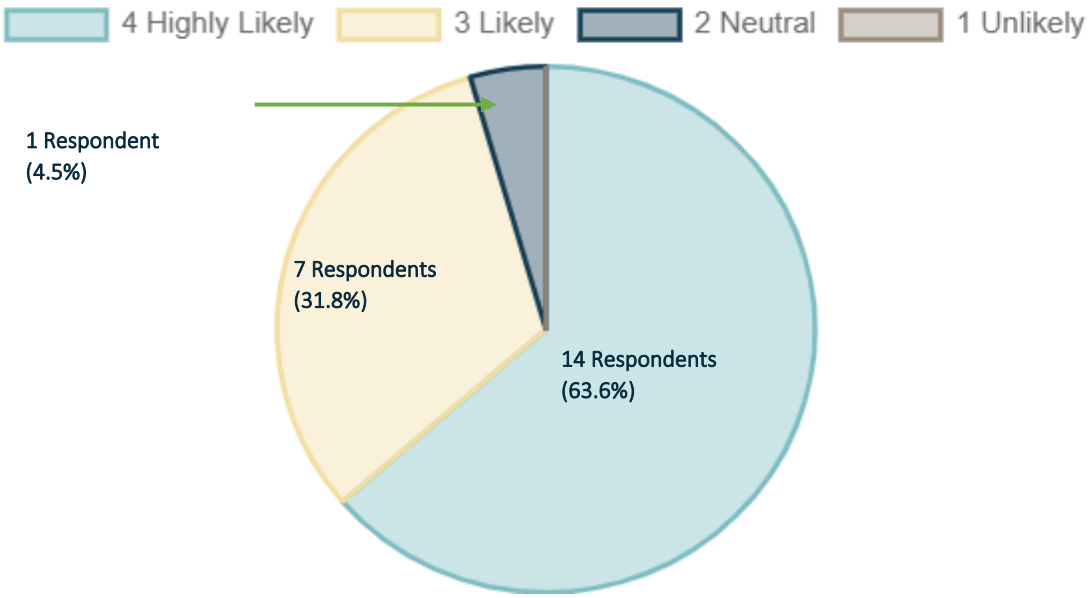
2. Will the provision of Reserved Parking in public spaces for electric vehicles encourage their adoption



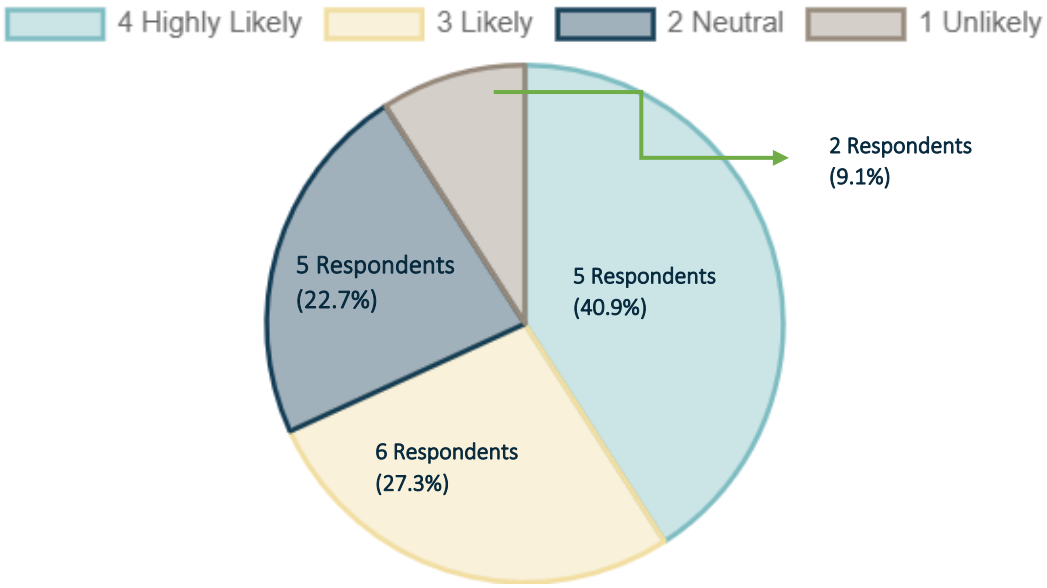
3. If governments modify building codes to mandate the accommodation of electric vehicle charging infrastructure, would that encourage consumers to adopt EVs given that charging would be convenient and accessible?



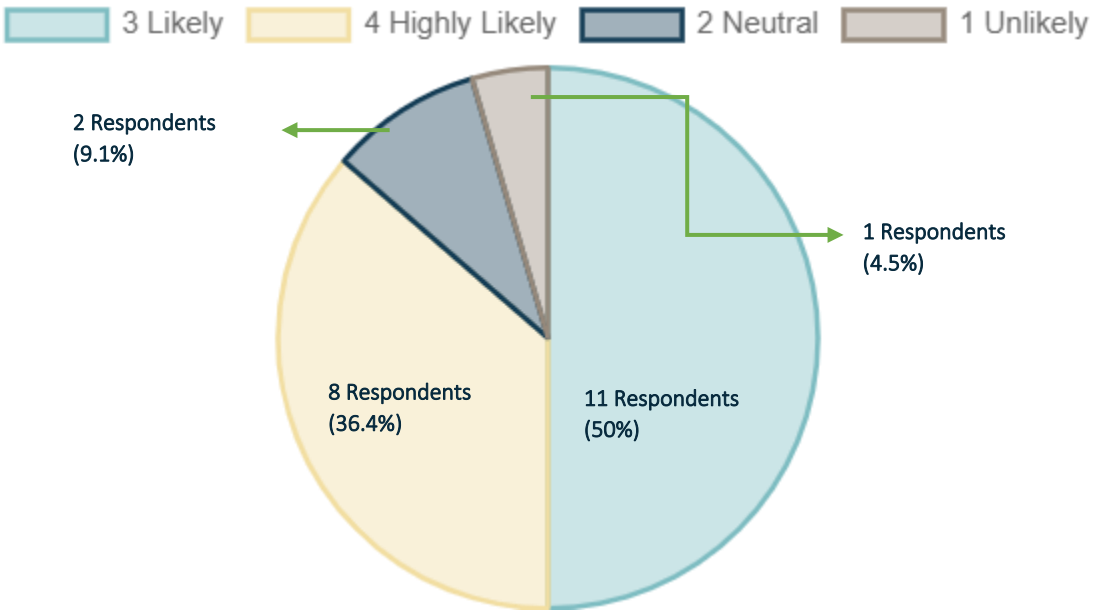
4. If governments adopt single window facility to smoothen the process of obtaining NOC for installing charging stations and providing preferential sanctioned load for charging infrastructure, faster registrations of vehicles etc, would that encourage the adoption of EVs, given that installation of charging would be made convenient for companies?



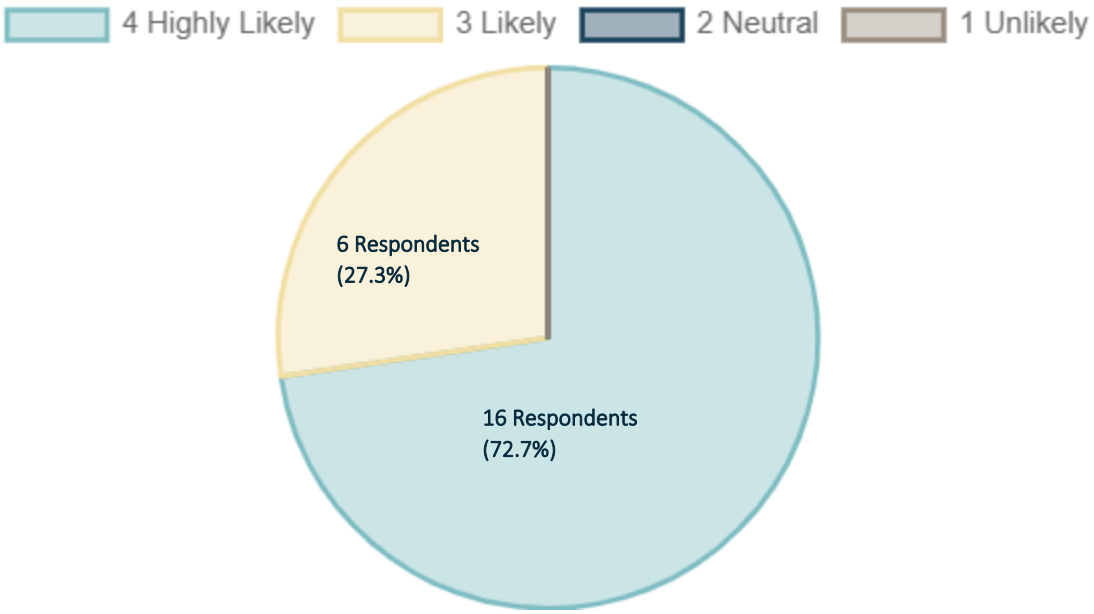
5. If EVs are exempt from the odd-even rule when applied during peak pollution times, would consumers see it as a benefit and be encouraged to shift to EVs?



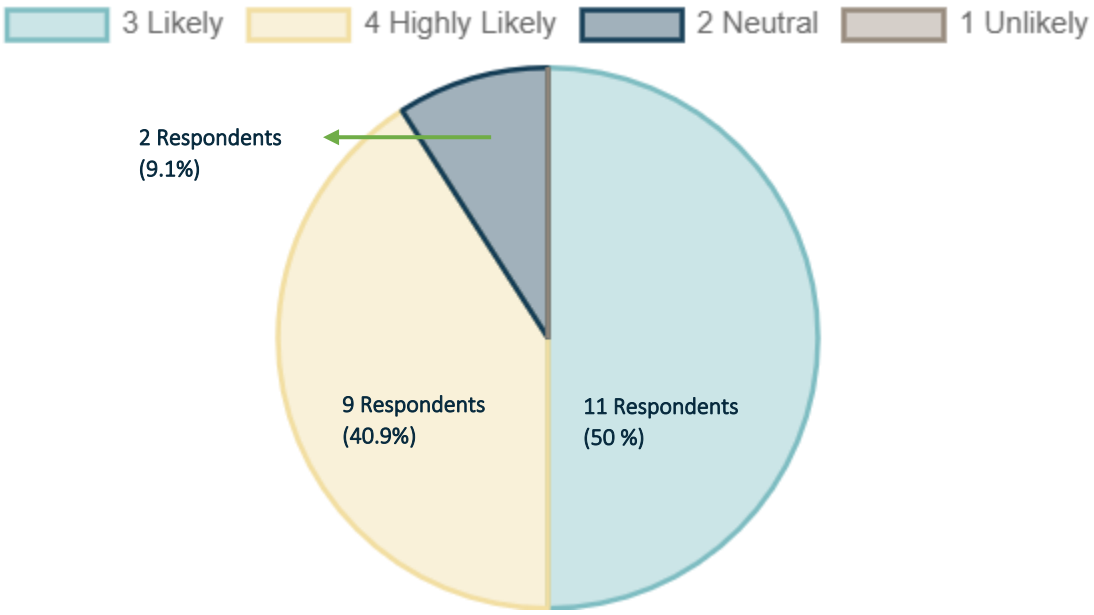
6. How likely do you think introducing discounted tariff rates for charging electric vehicles and implementing Time of Day tariffs would be to encourage EV adoption?



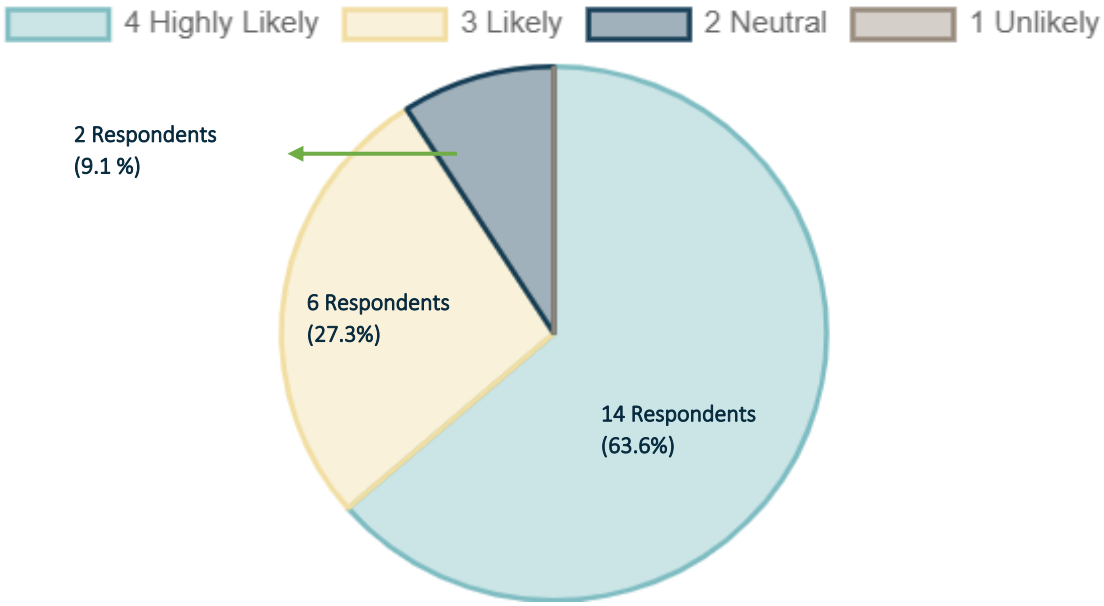
7. Will the availability of interest-free loans for electric vehicle purchases encourage their adoption?



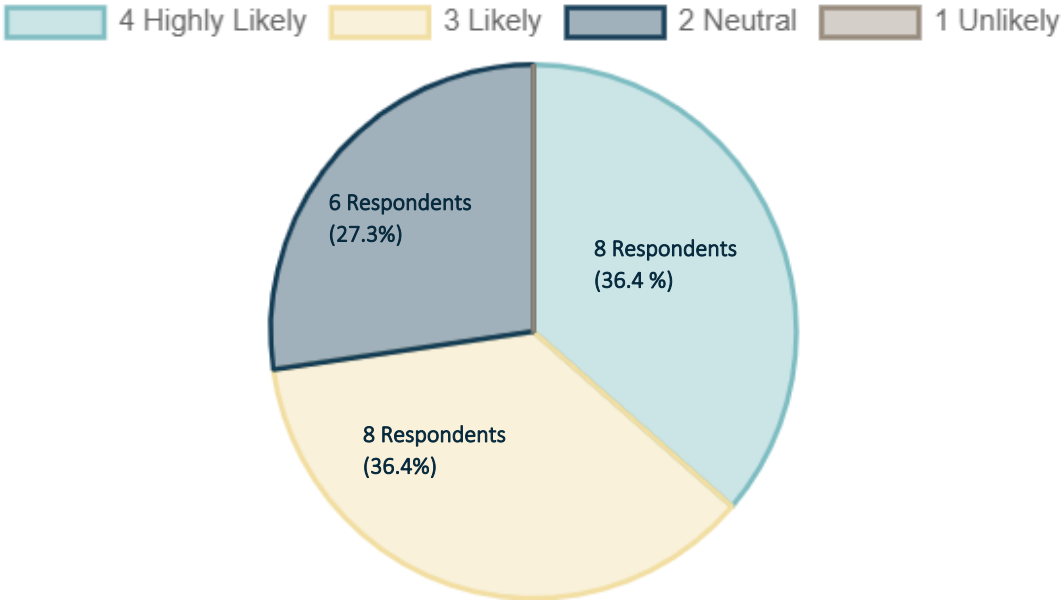
8. Do you think consumers will find interest subvention for electric vehicle purchases beneficial to reduce EV cost and therefore adopt EVs?



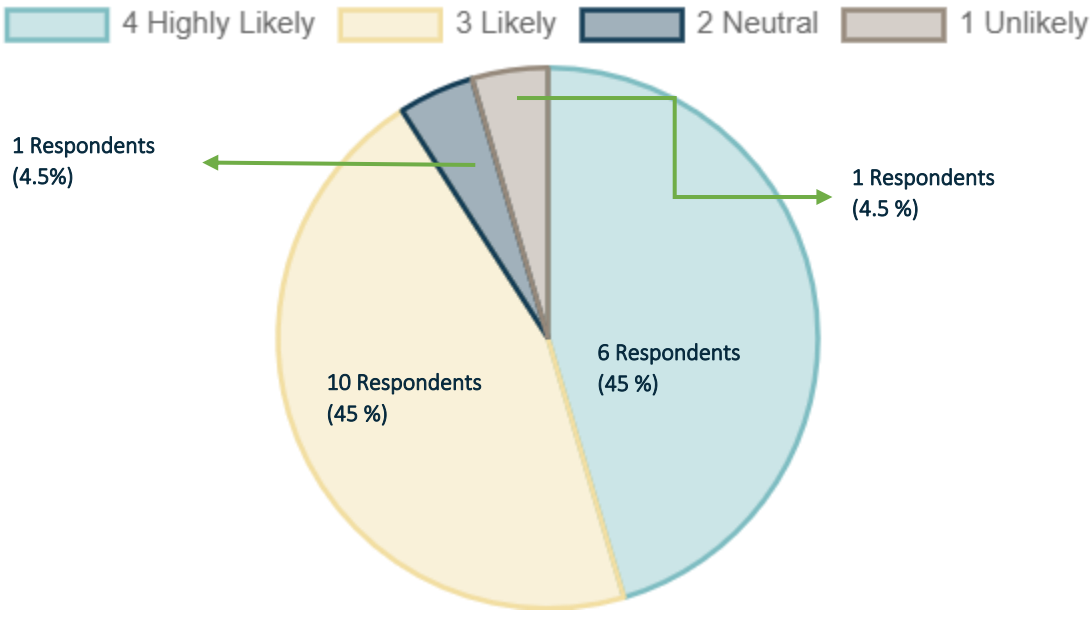
9. If EV businesses are reimbursed SGST (for leasing EV fleets, operating EVs, and providing charging or refueling infrastructure), would that help build the overall ecosystem and in turn encourage EV adoption?



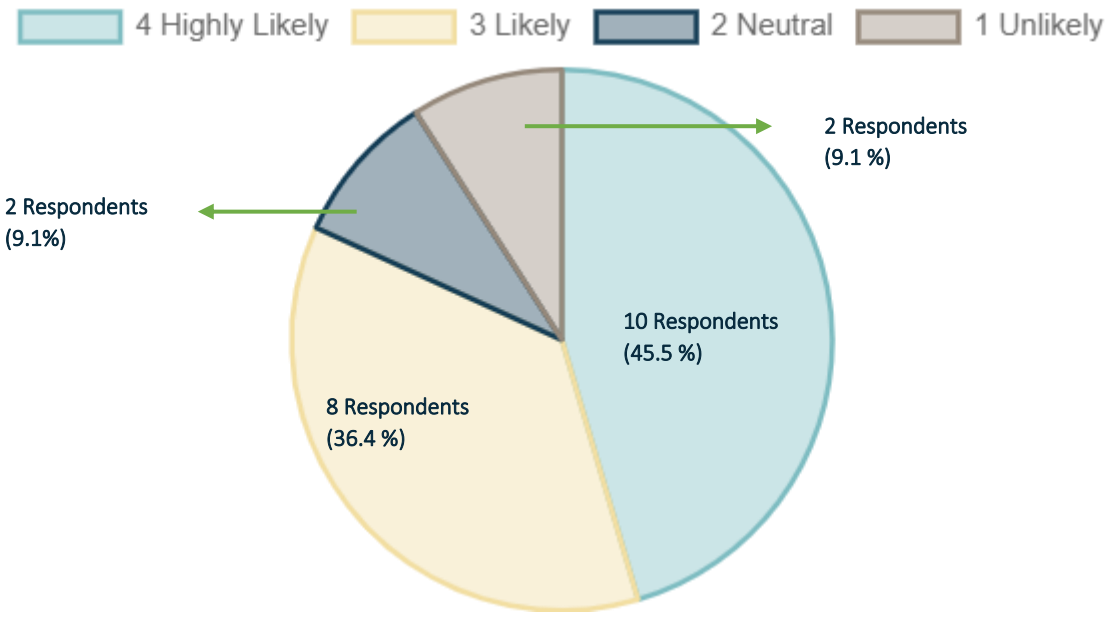
10. How likely do you think implementing a battery buy-back program for electric vehicles would be to encourage the adoption?



11. How likely do you think a phase-wise reduction of EV Road tax and RTO tax would be to encourage the adoption of electric vehicles ?



12. Will toll exemption for electric vehicles encourage their adoption?



13. How likely do you think the implementation of a ZEV credit program for manufacturers would be to incentivize them to produce more electric vehicles?