Law and Policy on the Development and Promotion of the New Energy Vehicle (NEV) Market in China

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Abstract

China's commitment towards becoming more innovative and environmentally-friendly, has led to the implementation of a myriad of policies to fulfill future development plans; which has subsequently allowed the New Energy Vehicle (NEV) market to thrive. The NEV market has benefitted from policies which incentivize and prioritize industries in the field of innovation and environmental technology, in addition to policies providing generous subsidies specifically towards the manufacturing and sales of NEVs. As China's NEV market continues to grow at a rapid pace, this paper will analyze the significance played by policies implemented at various government levels, towards facilitating the development and promotion.

Keywords

China, policies, development, promotion, new energy vehicle

1. INTRODUCTION

China is currently the world's largest electric vehicle market, and having set a sales target of 5 million New Energy Vehicles (NEVs) by 2020, has led to the implementation of policies at various government levels, to help facilitate further advancements towards the development and promotion of the NEV market. The NEV market plays an integral role in China's future development, as the 13th 5-Year Plan (2016-2020) has emphasized the importance towards innovation and transitioning into a Green Economy; as the targets provided in China's 5-Year Plans aren't policies themselves, they require policies to help facilitate achieving such targets.

China's commitment towards positioning themselves as global powerhouse in the fields of environmental development and innovation, has resulted in the nation shifting towards eco-friendly and innovative industries to help achieve future targets [Zheng et al., 2012]; thus, allowing the NEV market to thrive. China's NEV market has had a positive impact towards helping achieve such targets, as the market has facilitated such areas as reducing urban air pollution and carbon emissions, reducing the nation's dependence of oil, in addition to strengthening the labor market by providing more jobs and increasing the demand for specialized talents.

The current policies are a clear indication of China's strong commitment towards their NEV market. Policies regarding the issuance of subsidies, allows eligible NEVs to be sold at competitive prices; additionally, it removes skepticism over the lack of facilities, as subsidies are also provided to manufacturers of charging facilities. The NEV market has also benefitted through certain restrictions placed on their emission-based counterparts, thus creating a market-friendly environment for NEVs.

Currently, the Chinese NEV market is a subsidy driven market, and has surpassed the United States in terms of sales volume, by achieving a sales total of 336,000 NEVs in 2016, according the statistics provided by the International Energy Agency [International Energy Agency, 2017]. According to a report published on September 2017 by Bloomberg New Energy Finance, domestic NEV manufacturers such as BYD and BAIC fared better than their foreign counterparts, with both manufacturers accounting for roughly 40 % of the market, whereas Tesla accounts for 9 % of the market and is the only foreign NEV manufacturer holding a respectable share of China's NEV market [Bloomberg, 2017]. China's NEV market can be categorized into three types of vehicles; them being, battery electric vehicles (BEV), plug-in hybrid vehicles (PHEV), and fuel cell vehicles (FCEV).

Although the NEV market is currently a subsidy-driven market, the State Council has announced that all NEV subsidies would be slowly phased out by the end of 2020; hence, making the amendment and implementation of certain NEV-related policies inevitable.

2. HISTORY

2.1 Early stages (Developing NEVs)

The source of China's earliest NEV-related strategies can be traced back to the period of China's 8th 5-Year Plan, which proposed a plan to develop electric vehicles; resulting in the introduction of government-

sponsored programs to financially support institutions engaging in such research.

Having laid the foundation, a bigger emphasis would be placed towards R&D for electric vehicles, during the span of China's 10th 5-Year Plan (2001-2005), which saw a total of RMB 880 million being invested towards the development of the industry [Chinese Academy of Sciences, Chinese Academy of Engineering, National Academy of Engineering, National Research Council, 2004; Zhou et al., 2004; Zhang et al., 2014].

2.2 Current stage (Developing and subsidizing the NEV market)

Energy conservation was a focal point of the 11th 5-Year Plan (2006-2010), thus resulting in the implementation of policies to heavily develop and promote the usage of NEVs. In 2009, the Ministry of Finance and the Ministry of Science and Technology provided a strategy and proposal for the adoption of NEVs, through the publication of the "Circular on Launching the Pilot Demonstration Program for Energy Conservation and New Energy Vehicles" which resulted in the introduction of the Ten Cities, Thousand Vehicles Program during the same year. The Ten Cities, Thousand Vehicles Program would include 10 more cities each year and stipulated that each city would be required to produce one thousand NEVs, in hopes of having NEVs account for 10 % of the domestic automobile market by 2012 [Gong et al., 2013; Marquis et al., 2013].

The targets set forth in the 12th 5-Year Plan (2011-2015) would lead to an accelerated development of NEVs and the NEV market. Under the previous plan, the intention of developing the NEV market was due to the many benefits it had towards reducing problems concerning the conservation of energy and the reduction emission rates; the plan continued to develop the NEV market on the basis of environmental protection, in addition to their new concept of developing the NEV market as a means to improve the current state of the automobile industry.

The introduction of the State Council's publication of the "Energy-Saving and New Energy Vehicle Industry Development Plan (2012-2020)" in 2012, provided a strategy to ensure a stable development of the NEV market, additionally the plan provided sales targets of 5 million NEVs by 2020. These targets led to the promulgation of policies regarding subsidies towards buyers and manufacturers of NEVs and NEV-related technology, thus transforming the NEV market into a subsidy-driven market. Chinese branded NEVs will also be expected to compete at an international level, with the introduction of "Made in China 2025" in 2015, which initiates a strategy to upgrade the quality of locally produced products and compete at an international standard by 2025; which could result in Chinese NEV manufacturers placing a bigger emphasis towards the exportation of their NEVs. Additionally, the decentralization of policies and enforceability would ensure that the national targets would be achieved within the given timeframe, as the Municipal, Provincial and City level governments started to issue NEV-related policies, corresponding to the policies set forth at the national level.

Under the 13th 5-Year Plan (2016-2020), China has listed the development of innovative standards and transitioning into a Green Economy as a few of their top priorities, hence solidifying their commitment towards developing and promoting the NEV market; as of July 2017, NEVs are required to comply with the manufacturing standard set forth in the "Access Management Rules for New Energy Vehicle Production Enterprises and Products", thus ensuring that future NEVs adhere to an adequate safety standard. Furthermore, China's commitment towards their environmental targets has resulted in harsher restrictions being placed on emission-based vehicles, creating a more favorable environment for NEVs.

3. NATIONAL LEVEL

3.1 Development and promotion

The beginning stages regarding the development and promotion of the NEV market occurred during the 11th 5-Year Plan, when the government proposed a strategy for technology in the industry of energy conservation. As the integration of such technologies were fairly new, the policies regarding development and promotion, were tested as pilot programs in selected cities, before introducing the policy nationwide. The targets provided in the "Energy-Saving and New Energy Vehicle Industry Development Plan (2012-2020)" would serve as a basis for forthcoming policies, such as the "Guiding Opinions on Accelerating the Promotion of the Application of New Energy Vehicles", which was published by the State Council in 2014. The policy provided subsidies towards different forms of NEV-related activities, with the issuance of subsidies corresponding with supporting policies that were implemented in accordance with the "Guiding Opinions on Accelerating the Promotion of the Application of New Energy Vehicles". For example, the "Announcement on the Exemption of Vehicle Purchase Tax on New Energy Vehicles" published by the Ministry of Finance, the State Administration of Taxation and the Ministry of Industry and Information Technology in 2014, stipulates that subsidies will only be provided to NEVs whom are listed on the most

updated catalog; the 15th version of the catalog was published on 19 December 2017 [Ministry of Industry and Information Technology, 2017].

The issuance of subsidies has helped towards creating a market friendly environment in other areas of the market, as subsidies are also provided towards the manufacturing of charging facilities, additionally, the development strategy for charging facilities are provided in the "Development Guideline on EV Charging Infrastructure 2015-2020". The plan provided nationwide target of 5 million newly constructed charging piles throughout 2015 to 2020, whilst addressing the need to establish a more developed charging network; this resulted in the strategic placement of charging piles throughout different cities and saw charging piles being erected in gas stations and public parking facilities. Additionally, the plan called for the strengthening of support measures, to go in accordance with the "Guiding Opinions on Accelerating the Promotion of the Application of New Energy Vehicles"; stating that the relevant state departments are encouraged to formulate additional policies to provide fiscal support, whilst encouraging local governments to introduce the aforementioned policies and provide the fiscal subsidies at the local level.

Although the issuance of subsidies is the preferred method towards developing the market, other incentives are provided; mainly towards the buyers of NEVs, with the incentives varying by region. NEV owners are entitled to NEV-specific license plates in various cities, allowing them to obtain a license plate without having to participate in a license plate lottery. Certain areas provide NEVs with preferential parking or a reduction in highway fees.

3.2 Energy conservation and emission reduction

As NEVs have helped towards conserving energy and reducing emission rates, the continuous development and promotion of NEVs has been has been considered as an effective method of mitigating both concerns, as stated in State Council's publication of the "Air Pollution Prevention and Control Action Plan" in 2013; which simultaneously proposed restrictions to be placed on emission-based vehicles and saw subsidies being reduced for oil. Furthermore, China showed their commitment towards their environmental targets and NEV market on a global scale, by becoming a signatory of the Clean Energy Ministerial Electric Vehicles Initiative in 2016.

Although certain environmental factors such as China's amendment of their Environmental Protection Law in 2014 and ratification of the Paris Agreement in 2016, weren't initiated as a means to stimulate growth of the NEV market, they strongly indicate China's commitment towards their environmental targets, hence proving that China's favorability towards NEVs will continue to increase.

Apart from prohibiting emission-based vehicles which don't comply with the proper emission standards, the manufacturing process of emission-based vehicles will soon be subject to a standard which highly favors NEVs, through the introduction of the Carbon Credit Trading Scheme. The scheme applies to automobile manufacturers whom meets the National Development and Reform Commission's minimum sales threshold and provides them with a carbon credit quota. Manufacturers can earn carbon credits through the manufacturing of NEVs, which are needed to manufacture emission-based vehicles; the repercussions of exceeding the quota includes a hefty fine worth five times the amount of a carbon credit. Although the scheme has yet to be initiated, it already provides quotas for 2019 and 2020; additionally, the scheme will ensure that a suitable amount of NEVs will be manufactured after the phasing of all subsidies.

Additionally, manufacturers of emission-based vehicles are expected to suffer the ultimate blow, as China intends to ban all emission-based vehicles in the future, as stated by the Vice Minister of the Ministry of Industry and Information Technology, Xu Guobin [Electrek, 2017]; thus, leading to certain manufacturers, such as Ford and Daimler, to start shifting their attention towards manufacturing NEVs for the Chinese market.

3.3 Foreign branded NEVs

Foreign branded NEVs have also capitalized on China's demand and started to build a stronger presence in the market; despite having their NEVs priced at a significantly higher rate, due to the high levels of taxes and customs duties imposed on imported vehicles, resulting in the additional expense being passed onto the customer. The huge markup placed on imported NEVs places them at a disadvantage compared to their locally manufactured counterparts.

In order for foreign NEV manufacturers to circumvent the issue and build a stronger presence in the Chinese market, they are required to manufacture their vehicles locally; with the current regulations stipulating that foreign manufacturers are required to engage in a joint venture with a local partner. The joint venture mandate (JV Mandate) for automobile manufacturers imposes stricter thresholds on foreign parties, compared to the threshold provided in the Law on Sino-Foreign Equity Joint Ventures (EJV Law). The EJV Law only sets a minimum threshold of 25 % of equity capital to be owned by the foreign entity [Shen, 2016], without mentioning a maximum threshold, whereas the JV

Mandate prevents foreign entities from owning more than 50 % of the joint venture, such as the formation of BMW Brilliance Automotive Ltd. in Shenyang by BMW Group (50 %), Brilliance Auto Group Holdings Co., Ltd. (40.5 %) and the Shenyang Municipal Government (9.5 %), which has manufactured such vehicles as the BMW 530Le and BMW 520Li, exclusively produced for the Chinese market; although both vehicles aren't listed in the most recent catalog, they have been issued subsidies in accordance with previous catalogs.

The establishment of the JV Mandate was expected to give Chinese manufacturers the capability to manufacture vehicles to the same standard as their foreign counterparts, however, due to the foreign entity's reluctance to provide their Chinese partner with their IP rights, the Chinese entities would only benefit from profits received from their engagement in the joint venture, rather than gaining the sufficient knowledge to produce automobiles to compete at the same standard as their foreign partners. Thus, leading to the formation of subsidiaries under the NEV joint venture to produce additional NEVs, in which the subsidiary would own 100 % of the IP rights and would be considered as a Chinese entity. As the subsidiaries are considered Chinese entities, they are entitled to certain tax benefits for certain activities such as R&D, additionally, the subsidiaries are expected to utilize the IP rights provided by the joint venture and manufacture vehicles under their own name; such as the Nissan Leaf, which is sold and manufactured in China as the Venucia e30, as Venucia being a subsidiary under the joint venture between Donfeng Motor Corporation (50 %) and Nissan Motors (50 %) [Forbes, 2016].

Although foreign NEV manufacturers are given certain boundaries to overcome, Chinese policies have shown a certain level of leniency towards foreign NEVs as they contribute towards China's development plans, hence the fact that certain NEVs have been eligible to receive NEV-specific license plates, such as the Tesla Model S, which is eligible to receive the aforementioned license plate in the Municipalities of Shanghai and Beijing. Furthermore, foreign branded NEVs which have been locally manufactured in China, have been included in previous catalogs for subsidy exemptions, thus proving that such vehicles have the capability of being included in future catalogs, if they comply with the standard; in addition to imported NEVs, such as the BMW i3 1Z81, which was included in the 10th catalog and imported by BMW (China) Automotive Trading Ltd. With regards to the JV Mandate, China is considering reducing the restrictions placed on the foreign entity, by allowing them to own more than a 50 % stake in the joint venture, as stated by the former Chairman of the NDRC, Xu Shaosi, during the World Economic Forum in 2016 [Bloomberg, 2016]; thus, enabling them to play a bigger role during decision making processes, whilst receiving more profits for their Chinese operations.

4. DECENTRALIZATION

4.1 Municipal enforcement (Shanghai and Beijing)

The Shanghai Municipal Government has placed a huge emphasis on increasing innovative technologies, such as NEVs and related technologies. Thus, resulting in Shanghai's automobile market making a swift transition from emission-based vehicles to NEVs, through the subsidies provided; the Shanghai Municipal Government issues their own subsidies towards NEVs under the "Circular of the General Office of the Shanghai Municipal People's Government on Forwarding the Interim Measures of Shanghai Municipality for Encouraging the Purchase and Use of New Energy Vehicles (Revised in 2016)" to comply with policies at the national level; the policy states that financial subsidies provided by the Shanghai Municipal Government, is based on certain factors in relation to energy conservation and emission reduction and requires NEV Manufacturers to sell their NEVs at the price given after the deductions of the financial subsidies, determined by both the Central Government and Shanghai Municipal Government.

Shanghai's hopes of becoming an innovative hub, has led to the implementation of policies to attract innovative enterprises, such policies have also benefitted NEV manufacturers indirectly, as they are eligible to receive certain Tax Benefits for their engaging in innovative projects, with preferential tax treatment provided in accordance with the "Notice Regarding Measures of Promoting the Comprehensive Innovation and Reform to Speed Up the Construction of Science and Technology Innovation Center with Global Influence in Shanghai". The Policy is only applicable within the Zhangjiang National Innovation Demonstration Zone and would encourage High and New Technology Enterprises (HNTE) to engage in innovative projects in Shanghai, which certain NEV manufacturers qualify as; by revising administrative measures to further promote the development of HNTEs and providing certain individual income tax benefits to the technical staff of HNTEs or Small and Medium sized science and technology enterprises; the policy could also lead to numerous NEV manufacturers and subsidiaries to registering their new enterprises in Shanghai, as the policy provides business startups with preferential tax treatment on investment and innovative activities during the startup phase, and gives considerable deductions on R&D expenses, in order to encourage R&D

activities.

The Development of NEV Charging Facilities aligns with Shanghai's future targets regarding innovation and green technologies. Earlier development proposals for Charging Facilities would be included in the "Shanghai Electric Vehicle Promotion and Application of Action Plan (2013-2015)", which provided an annual construction target to facilitate the 13,000 NEVs in 2015. Additionally, the plan would work towards the national target of 1 Charging Pile for 1 NEV on the road, while selecting certain areas to carry out measures to increase their Charging Facility Standards the basic standard, thus providing a solid foundation for future development. The"Shanghai Electric Vehicle Charging Infrastructure Plan (2016-2020) (Draft)" provided more comprehensive targets and measures, which included a target of 103.500 Charging Piles in 2017 and 211,200 Charging Piles in 2020; which also includes targets for each district and county, regarding the construction of high-speed charging facilities. The plan also stated that a charging pile would be conveniently located at every 0.9 KM, in such areas as inner and outer ring road and development zones for new energies, in addition to including a provision on increasing financial support towards the construction of Charging Facilities and provided a proposed budget of RMB 1.7 Billion by 2017 and RMB 3.8 Billion by 2020.

Shanghai has seen an increase in air pollution, due to accommodation vehicles for a population of over 24 million, this has led to the Shanghai Municipal Government taking the initiative to enforce certain regulations to reduce air pollution prior to the introduction of promoting NEVs, such as the introduction of the "Notice of Shanghai Municipal People's Government on Printing and Distributing the Provisions of Shanghai Municipality on the Administration of Auction of Non-profit Passenger Vehicle Quotas", which imposes an annual quota on the issuance of Shanghai license plates, in addition to reducing the amount of traffic by restricting highway accessibility to Non-Shanghai license plates during certain times, under the introduction of the "Notice of Shanghai Municipal Public Security Bureau on Adjusting Traffic Management Measures for Some Elevated Roads (Urban Expressway)". The use of NEVs as a means of reducing pollution in Shanghai would be included in the "Shanghai Clean Air Action Plan (2013-2017)", which goes in accordance with and helps facilitates the targets set forth in the "Air Pollution Prevention and Control Action Plan", introduced at the national level; such as Shanghai's manufacturing target of 5,000 charging points by 2017, to meet the target set at the national level.

In terms of developing and promoting the NEV market within a Municipality, the Beijing Municipal Government has introduced similar measures to the ones introduced in Shanghai. The "Beijing Clean Air Action Plan (2013-2017)" would also provide measures heavily promoting NEVs, the plan called for the implementation of new policies to help support the private purchase of NEVs and to help achieve Beijing's sales target of 200,000 NEVs by the end of 2017; a year after the plan's release, the Beijing Municipal Government would introduce the "Beijing Electric Vehicle Promotion and Application of Action Plan (2014-2017)", helping provide additional measures to further promote the NEV Market. The plan included an annual issuance of a certain amount of license plates to private NEV owners, without requiring them to participate in Beijing's License Lottery or to purchase a license plate through an auction.

The "Beijing Electric Vehicle Promotion and Application of Action Plan (2014-2017)" includes targets towards building a larger public charging service network, which will facilitate the growth of Beijing's NEV market. The provision provides a target of the placement of 10.000 fast-charging piles in certain areas. Additionally, the plan included targets for the promotion of individual charging piles, stating that no-less than 18 % of each parking area, would be equipped with charging piles. The targets regarding charging facilities would lead to the implementation of the "Circular on Promoting the Installation of Private Charging Facilities of New Energy Passenger Cars in Property Management Areas" and the "Detailed Rules on the Construction of Private Charging Facilities for New Energy Passenger Cars in Beijing"; both policies being implemented the same year as the "Beijing Electric Vehicle Promotion and Application of Action Plan (2014-2017)". Moreover, the plan proposed constructing an integrated charging service network between Beijing, Tianjin and Hebei, due to the proximity of the three regions, allowing NEV owners to conveniently engage in intercity journeys; thus, facilitating targets set at both the national and regional level [Zhang et al., 2017].

4.2 Provincial enforcement (Hebei and Yunnan)

According to an Air Quality Report published the Ministry of Environmental Protection in 2017, six of China's most polluted cities were located in Hebei; this is heavily attributed towards the fact that numerous iron and steel production plants are located in Hebei, in addition to the large size of Hebei's coal-mining industry. The Ministry of Environmental Protection also found 33 air pollution offenses during their investigation, with the majority of offenses com-

ing from companies located in Hebei. Given Hebei's current pollution situation, existing and future policies regarding air pollution reduction will be heavily enforced, while imposing higher accountability on the departments responsible; current policies would also include the use of NEVs to improve Hebei's pollution situation, hence allowing NEVs to benefit from the enforcement of policies regarding the promotion and development of NEVs, in addition to the enforcement of policies restricting the use of emission-based vehicles. Furthermore, the "Hebei Municipality Industrial Enterprise Transformation and Relocation Plan" was published one day prior to the announcement made from the Communist Party of China (CPC) Central Committee and the State Council, to establish a special economic zone in Hebei's Xiongan New Area. The plan corresponds with China's commitment towards their environmental and innovation targets, by imposing restrictions on several manufacturing-based industries in the region, in addition to requiring certain cities to transform and upgrade their automobile market; as NEVs are included in Hebei's plans to reduce air pollution, this will ensure that NEV related targets will be met, along with additional targets set in the plan. Additionally, the hierarchy for Hebei's NEV policies differs from Shanghai and Beijing, as policies regarding NEVs can even be found on the Municipal, Regional, City and District level. Implementing policies on all levels, with regards to preventing and controlling air pollution within the province, shows Hebei's strong commitment towards achieving targets set at both the National and Provincial Level, which will convince future NEV owners in the Province that purchasing an NEV is more feasible than an emission-based vehicle and will assure that policies regarding the matter, will be heavily enforced.

The "Hebei Pollution Prevention and Control Implementation Action Plan" would follow the National Plan to prevent and control air pollution, while enforcing their own measures. The Plan would propose a sales target of 50,000 NEVs by the end of 2017, leading to the implementation of policies to help provide financial subsidies towards the private purchase of an NEV, in addition to strengthening environmental management for emission-based vehicles, by suggesting the implementation of a higher vehicle emissions standard. Apart from complying with Regional Policy to prevent and control air pollution, policies have been implemented under the Provincial Level; such as the Tangshan Government's publication of the "Tangshan City Air Pollution Prevention and Control Implementation Plan (2013-2017)" and even the Tangshan Fengrun District's implementation of the "Tangshan City Fengrun District Air Pollution Prevention and Control Implementation Plan (2013-2017)", both of which enforces the phasing of emission-based vehicles to assist the Hebei Provincial Government in achieving the targets set forth in the "Hebei Pollution Prevention and Control Implementation Action Plan".

As stated in the "Hebei Provincial Government Opinions Regarding Accelerating and Promoting the Development of New Energy Automotive Industry Through Policy Measures", financial subsidies provided to NEVs will be proportional (1:1) to the National Standard and cannot exceed the retail value of the NEV; the policy also exempts NEVs from paying any expressway fees. Financial Subsidies provided at the City Level could differ from the policy implemented on the National Level, as the "Shijiazhuang City Opinions Regarding Accelerating and Promoting the Development of New Energy Automotive Industry Through Policy Measures" states that NEV subsidies provided by the Shijiazhuang Government will be at a ratio of 1:0.5 to the National Standard and that the Subsidies cannot exceed 80% of the retail value, whereas the "Langfang Promotion of Financial Subsidy Measures for the Application of New Energy Vehicles" provides financial subsides which are proportional (1:1) with the national standard and stipulates that the financial subsidies cannot exceed 60 % of the NEVs retail value.

The "Hebei Province NEV Industry "13th 5-Year" Development Plan (2016 - 2020)", would set a target of 1000 Charging Stations and 100.000 Charging Piles by the end of 2020. This would lead to the implementation of policies under the Provincial Level to comply with the Provincial Targets, such as the implementation of the "Shijiazhuang NEV Charging Infrastructure Development Plan (2016-2020)", which set a target of 318 Charging Stations and 24.150 Charging Piles by the end of 2020; additionally, Shijiazhuang's Plan would include a provision regarding subsidizing Charging Facilities, by providing a 30 % subsidy on equipment used during the manufacturing process, while stating that no more than RMB 2 Million can be provided per project.

Although Yunnan complies with NEV targets set at the National Level, the Yunnan Provincial Government's approach towards NEV development differs from other provinces; additionally, Yunnan's policies regarding the phasing of emission-based vehicles aren't evident. The Province of Yunnan is not required to follow the National targets set forth in the "Air Pollution Prevention and Control Action Plan", instead, the Yunnan Municipal Government is required to make continuous improvements towards the air quality; additionally, Yunnan's 13th 5-Year Plan, only refers to making further developments towards NEVs and doesn't mention

the use of NEVs as a means to prevent and control air pollution in the Province.

Although the emission reduction isn't a huge concern for the Province of Yunnan, automobile manufacturing is one of Yunnan's main manufacturing industries and has seen further development in the industry, as numerous NEV manufacturers have started to open manufacturing plants in the province. Yunnan has emphasized the development of innovative measures, which has attracted the likes of BYD to engage in manufacturing projects within the Province, in addition to the Province boasting their own Hi-Tech Zone in Kunming; thus, prompting the Yunnan Municipal Government to promote the NEV market as a means to develop innovation and their automobile market as a whole, rather than facilitating environmental targets.

Policies promoting the purchasing and manufacturing of NEVs were implemented to achieve the targets provided in the "Yunnan New Energy Automotive Industry Development Plan (2016 - 2020)"; which included a sales target of 18,000 NEVs and a manufacturing target of 300,000 NEVs by the end of 2020. The same year, the Yunnan Provincial Government published the "Opinions of the Yunnan Provincial Government on the Focus on Promoting the Development of Key Industries", in order to comply with National Standards and to speed up the development and application of NEVs within the province. This led to the Yunnan Provincial Government implementing the "Opinions Regarding Accelerating and Promoting the Development of New Energy Automotive Industry Through Policy Measures", with the policy stipulating that new manufacturers of passenger NEVs would receive a subsidy of RMB 5 million; including no conditions on the proper usage of the allocated sum. The policy also covered the manufacturing of NEVs, which provided a subsidy of RMB 1 million for every new NEV included in the NEV catalog, with a subsidy reduction of 50 % after the manufacturer has had 5 NEV models included in the catalogue. Although the Policy stated that promoting the use of NEVs would be done through providing subsidies in proportion (1:1) to the National Standard, the policy also stated that policies subsidies provided under the Provincial Level would be provided at a 1:0.5 ratio, with the Kunming Government providing the 1:0.5 ratio in the "Management Approach of Kunming to Fund the Promotion of New Energy Vehicles Through the Use of Financial Subsidies". The Yunnan Municipal Government's decision to provide a NEV subsidy ratio of 1:05 to the National Standard, is a clear indication that Yunnan's GDP is heavily reliant on the manufacturing on automobiles, hence the fact that the Yunnan Municipal Government provides a subsidy that doesn't heavily favor NEVs over their emission-based counterparts, compared to the Governments from other Provinces; thus, allowing them to comply with National NEV targets and maintain their own automobile market

5. CONCLUSION

In conclusion, it is inevitable that policies regarding the development and promotion of NEVs will be amended, as China will approach the end of the 13th 5-Year Plan. With the annual phasing out of subsidies, newer policies would be expected to impose regulations that aren't as favorable towards NEVs and could see China adopting rule of law to govern certain aspects of the NEV market; such as anti-competitive conduct.

The engineering standard of NEVs is expected to increase, to achieve the goals set forth in "Made in China 2025" and comply with new market access standards, which will increase the marketability and credibility of Chinese NEVs without the help of subsidies.

Foreign NEVs could benefit from the newer policies as the price gap between Chinese and Foreign Branded NEVs would decrease due to the phasing of policies and could see additional profits from amendments made towards the JV mandate.

Manufacturers of emission-based vehicles will also be placed at a disadvantage due to the continuous promotion of NEVs and will continue to do so, after the phasing of NEV subsidies; with the Government, having introduce such mechanisms as placing restrictions on emission-based vehicles whom don't meet the necessary emission standards, in addition to the implementation Carbon Credit Trading Scheme and the reform of fossil fuel subsidies, thus ensuring stability and less competition for the NEV market. Such policies will lead to manufacturers of emission-based vehicles to shift towards manufacturing NEVs in order to continue to have a presence in the Chinese market.

Furthermore, the roles played by lower level authorities towards China's NEV market will increase, due to the decentralization of policies, which will see the authorities concurrently using the National Standard, in addition to implement separate mechanisms, in which they deem necessary towards achieving National targets in addition to their own. Additionally, as the Regional policies are required to comply with the National Standard, this prevents Regional Governments from engaging in a race to the bottom, in which the Regional Governments would provide higher tax incentives and lower market access, in order to increase Regional GDP; thus allowing Provinces which heavily rely on automobile manufacturing to increase Regional GDP to impose measures which aren't as

stringent towards emission-based vehicles, but simultaneously allowing them to comply with NEV targets set at the national level.

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