

## EVALUATING FAME-II: INSIGHTS AND ROAD AHEAD

### 1. OVERVIEW

The Government of India ("GoI") had introduced the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles ("FAME") scheme in the year 2015 to promote the adoption of electric and hybrid vehicles in the country.<sup>1</sup> The scheme aims to reduce vehicular emissions, decrease dependence on fossil fuels, and encourage the development of indigenous manufacturing capabilities for electric vehicles ("EVs") and their components, and serves as one of the preeminent initiatives for encouraging EV adoption in India.

The FAME scheme has been brought about in two phases, the first phase ("FAME-I") commenced in 2015 and was extended till 2019, while the second phase of the scheme ("FAME-II") commenced in 2019 for an initial period of three years and has been extended till 2024.

In this article, we seek to delve into the obstacles faced in the successful implementation of different phases of the FAME scheme, lessons learnt from them, and the future of FAME and similar initiatives introduced by the GoI in the EV industry, in contemplation for what a potential third phase of FAME could entail.

### 2. FAME AND ITS CHALLENGES

The initial stages of FAME allowed clean mobility to take a centre stage, by providing the first impetus for the growth of the EV industry in India. Under FAME-I, about 2,78,000 (two lakh seventy eight thousand) EVs were supported with total demand incentives of nearly USD 40 (forty) million.<sup>2</sup> So far, under FAME-II, over 8,72,000 (eight lakh seventy two thousand) EVs have been supported through demand incentives.<sup>3</sup> This is in contrast with the year 2014, prior to the introduction of FAME, when only 480 (four hundred eighty) EVs were sold during the entire year.<sup>4</sup> While the growth in the sector is commendable, the FAME scheme is yet to put India on par with the international markets, with the country's EV penetration at only 1.5% (one point five per cent), far below the international average of 14% (fourteen per cent).<sup>5</sup>

Recent challenges concerning localisation norms and allegations against some manufacturers utilizing Chinese imports have brought to light broader issues of insufficient manufacturing facilities, import dependence, and lack of focus on research and development ("**R&D**"). These underscore the urgency to comprehensively assess the FAME scheme, and to identify viable solutions to foster a thriving domestic EV ecosystem.

In this article, we have highlighted the issues faced in the implementation and success of the two phases of the FAME scheme. Addressing these challenges presents an opportunity for positive reforms within the EV sector and further strengthening the FAME scheme's objectives to accelerate EV adoption in India.

I

### www.induslaw.com

Page **1** of **10** 

Chennai

```
Delhi & NCR
```

<sup>&</sup>lt;sup>1</sup> Please refer <u>https://fame-india.gov.in/ViewNotificationDetails.aspx?RowId=5</u>

<sup>&</sup>lt;sup>2</sup> Ibid paragraph 5.

<sup>&</sup>lt;sup>3</sup> Please refer <u>https://fame2.heavyindustries.gov.in/dashboard.aspx.</u>

<sup>&</sup>lt;sup>4</sup> Please refer <u>https://vahan.parivahan.gov.in/vahan4dashboard/vahan/view/reportview.xhtml.</u>

<sup>&</sup>lt;sup>5</sup> Please refer <u>https://www.iea.org/reports/global-ev-outlook-2023</u>.

Bengaluru



### 2.1 FAME-I: Aim and Issues

FAME-I focused on encouraging mass adoption of EVs by focusing on four key areas – (i) technology development; (ii) demand-side incentives; (iii) pilot projects; and (iv) charging infrastructure.

FAME-I launched with an outlay of approximately USD 96 (ninety six) million spread over a period of two years.<sup>6</sup> The scheme was extended four times for six months each, and its outlay was increased to about USD 110 (one hundred ten) million until the scheme concluded in 2019.<sup>7</sup> Almost half of the total outlay focused on demand-side incentives for EVs.<sup>8</sup> These demand incentives were in the form of an upfront reduction in the purchase price that was reimbursed to the original equipment manufacturer ("**OEM**") of the EVs.

However, FAME-I faced numerous issues during its tenure and the progress of EV adoption remained slow during this period. FAME-I was also criticised for incentivising older polluting vehicles. For example –

- A significant part of the subsidies under FAME-I were offered to outdated technologies such as leadacid battery-based vehicles, that are known to have limited capacities and short lifespans.
- FAME-I included subsidies on hybrid vehicles like mild-hybrid vehicles that only save fuel while at a stoppage such as at a traffic light, and may be equally polluting to ICE-based vehicles.
- For buses, incentives were offered only to buses with hybrid technologies, running on compressed natural gas ("CNG") or diesel-based engines, despite these being conventional fossil fuels.<sup>9</sup>

By the end of FAME-I in 2019, at least 40% (forty per cent) of the total outlay remained unutilised, and the progress of implementation was slow and limited. Only about 400,000 (four lakh) EVs were registered in India from 2015 to 2019, which accounted for less than 0.4% (zero point four per cent) of all vehicles registered during such time.<sup>10</sup> Thus, there was a need for revamped incentives in the industry.

# 2.2 FAME-II: Reparations and New Challenges

Keeping in mind the issues with FAME-I, the second phase of the FAME was released in 2019, with a much bigger allocated budget of approximately USD 1.2 (one point two) billion, scheduled to conclude in 2022.<sup>11</sup> The scheme has since been extended for two years until 2024.<sup>12</sup>

Through FAME-II, the GoI attempted to broaden the ambit of incentives by increasing the total outlay of the scheme, focusing on charging infrastructure, supporting public transport through focus on electric

### www.induslaw.com

Page 2 of 10

Bengaluru

L

Chennai

Delhi & NCR

Hyderabad

<sup>&</sup>lt;sup>6</sup> Paragraph 4 and 5 of FAME-I scheme available at <u>https://heavyindustries.gov.in/writereaddata/UploadFile/OM\_FAME\_India.PDF.</u>

<sup>&</sup>lt;sup>7</sup> Gol, Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, S.O.1055(E) (30 March 2017) and S.O.3013(E) (12 September 2017) and S.O.1657(E) (13 April 2018) and S.O.4994(E) (27 September 2018) available at <a href="https://fame-india.gov.in/ViewNotification.aspx">https://fame-india.gov.in/ViewNotification.aspx</a>.

 <sup>&</sup>lt;sup>8</sup> Paragraph 5 of the FAME-I scheme available at <u>https://heavyindustries.gov.in/writereaddata/UploadFile/OM\_FAME\_India.PDF.</u>
 <sup>9</sup> Paragraphs 10, 26 and Annexure 13 of the FAME-I scheme available at <u>https://heavyindustries.gov.in/writereaddata/UploadFile/OM\_FAME\_India.PDF.</u>
 <sup>10</sup> Please refer <u>https://vahan.parivahan.gov.in/vahan4dashboard/vahan/view/reportview.xhtml</u>.

<sup>&</sup>lt;sup>11</sup> Paragraph 9 of the FAME-II scheme available at https://fame2.heavyindustries.gov.in/WriteReadData/userfiles/8th%20March%202019%20Gazette%20Notification%20FAME-II.pdf.

<sup>&</sup>lt;sup>12</sup> GoI, Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, S.O.2526(E) (25 June 2021) available at https://fame2.heavyindustries.gov.in/WriteReadData/userfiles/Gazette%20for%20Scheme%20Extension.pdf.



buses, electric two wheelers ("E2Ws") and electric three wheelers ("E3Ws"), as well as emphasising on domestic manufacturing of EV components.

Several changes were made under FAME-II to redress the concerns faced under FAME-I -

- EVs based on older and less-sustainable technologies such as lead-acid battery based and mild-hybrid technology-based vehicles were no longer considered eligible.
- Strong-hybrid systems and plug-in hybrids<sup>13</sup> were considered eligible only for electric four-wheelers ("E4W").<sup>14</sup>
- Maximum ex-factory price of the EV was specified to restrict high-end vehicles from availing the subsidy.<sup>15</sup>
- Enhancements were made to minimum safety and technical standards, minimum warranty period, among other requirements to ensure that low quality vehicles are not subsidised.
- The scheme was extended to the entire country, rather than only urban areas (as was the case in FAME-I).<sup>16</sup>

However, despite these measures, FAME-II appears to have fallen short of the anticipated success due to various concerns. These include –

### (a) Concerns around localisation norms

Localisation norms have been provided under FAME-II, read with the notifications issued by the Ministry of Heavy Industries ("**Ministry**") under the Phased Manufacturing Programme ("**PMP**") guidelines.<sup>17</sup>

Depending on the policy framework, localisation norms can take many forms. For example, in certain sectors such as medical devices, mobile phones and smartwatches, these norms are in the form of a deterrent, through gradually increasing import duties.<sup>18</sup> In some other sectors such as National Programme on Advanced Chemistry Cell (ACC) Battery Storage, domestic value addition at a specified percentage is a precondition for being eligible for incentives.<sup>19</sup>

Under FAME-II, localisation norms are in the form of deadlines for indigenisation on a component and vehicle category basis. Presently, every component of the EV except battery cells, thermal management systems and battery management systems associated with the battery of the vehicle is required to be locally manufactured and assembled, in order to be eligible for incentives under

# www.<mark>indus</mark>law.com

Page **3** of **10** 

I

Chennai

```
Delhi & NCR
```

<sup>&</sup>lt;sup>13</sup> Strong hybrid vehicles consist of a combustion engine and an electric motor that work in conjunction. The electric motor can power the car in certain scenarios like low-speed city driving, while the engine can assist when more acceleration is required. Their batteries are charged largely through regenerative braking. On the other hand, a plug-in hybrid EV can be recharged by plugging a charging cable into an external electric power source, in addition to regenerative braking.

 <sup>14</sup> Paragraph
 15
 of
 the
 FAME-II
 scheme
 available
 at

 https://fame2.heavyindustries.gov.in/WriteReadData/userfiles/8th%20March%202019%20Gazette%20Notification%20FAME-II.pdf.
 at

 15
 *Ibid* paragraph 25.
 at

<sup>&</sup>lt;sup>16</sup> *Ibid* paragraph 28 and 29.

<sup>&</sup>lt;sup>17</sup> *Ibid* paragraph 29(a).

<sup>&</sup>lt;sup>18</sup> Please refer <u>https://www.meity.gov.in/content/phased-manufacturing-programme.</u>

<sup>&</sup>lt;sup>19</sup> Paragraph 3.5 of the National Programme on Advanced Chemistry Cell (ACC) Battery Storage available at <u>https://heavyindustries.gov.in/writereaddata/UploadFile/ACC%20Scheme%20Notification%209June21.pdf.</u>

Bengaluru



FAME-II.<sup>20</sup> However, notably, FAME-II does not prescribe domestic value addition, or any other threshold for analysis of whether a part is indigenous or imported. This makes it vague when components would qualify as indigenous, especially when sub-components or sub-parts of a component may be imported.

However, these localisation norms have brought to light underlying issues within the automotive industry -

*i.* Subsisting reliance on imports

Notably, the automotive industry, including that of non-EVs, relies heavily on imports for its component needs. While OEMs advertise 95% (ninety-five per cent) localisation for their cars,<sup>21</sup> this number does not showcase the entire value chain, as parts have sub-parts or sub-assemblies or raw materials that may be imported.

For EVs, this issue is more pronounced since OEMs are completely dependent on import of battery, which generally accounts for a significant 30-40% (thirty to forty per cent) of the vehicle cost. Currently, the market for battery manufacturing and refining is largely controlled by China.<sup>22</sup> Further, manufacturing for other components that aid in an EV's high-voltage circuit are also centred in China.

Hence, while FAME-II would be able to promote indigenous manufacturing at the OEM level, it does not delve into the entire value chain, especially batteries, for which the industry continues to rely on imports.

If India wants to reduce its import dependence, it is imperative to provide support for high quality and affordable locally produced solutions, which is currently inadequate. Localisation norms alone may not be able to boost domestic production holistically - it is imperative to pursue end-to-end localisation.

*ii. Compliance issues* 

Recently, seven E2W OEMs were found to be non-compliant with localisation norms stated under PMP, whose demand incentives were consequently put on hold.<sup>23</sup> These OEMs accounted for nearly every second E2W sold, as the tally of beneficiary E2Ws was slashed from 9,89,000 (nine lakhs eighty-nine thousand) to just under 5,64,000 (five lakhs sixty-four thousand).<sup>24</sup>

At the same time, while recognizing the potential benefits of procuring components locally, it is essential to acknowledge the complex landscape that OEMs navigate. While procuring components locally may be possible, we understand that doing so currently is impractical for OEMs due to unsuitable quality of raw materials and components available in the local

### www.<mark>indus</mark>law.com

Page **4** of **10** 

Bengaluru

I

Delhi & NCR

<sup>&</sup>lt;sup>20</sup> GoI, Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, F.No. 7(06)/2019-NAB-II(Auto) (20307) available at <a href="https://fame2.heavyindustries.gov.in/WriteReadData/userfiles/PMP%2029Spet20.pdf">https://fame2.heavyindustries.gov.in/WriteReadData/userfiles/PMP%2029Spet20.pdf</a>.

<sup>&</sup>lt;sup>21</sup> Please refer <u>https://www.skoda-storyboard.com/en/skoda-world/skodas-indian-boost/.</u>

<sup>&</sup>lt;sup>22</sup> Please refer <u>https://about.bnef.com/blog/china-dominates-the-lithium-ion-battery-supply-chain-but-europe-is-on-the-rise/.</u>

<sup>&</sup>lt;sup>23</sup> Please refer <u>https://sansad.in/getFile/loksabhaquestions/annex/1712/AU1939.pdf?source=pqals</u>.

<sup>&</sup>lt;sup>24</sup> Please refer <a href="https://www.deccanherald.com/business/fame-electric-two-wheeler-beneficiary-tally-cut-report-1223363.html">https://www.deccanherald.com/business/fame-electric-two-wheeler-beneficiary-tally-cut-report-1223363.html</a>.

Chennai

Hyderabad



market, high rejection rates on orders, and expensive components.<sup>25</sup> These factors have collectively led to creation of practical constraints for OEMs in their pursuit of complying with the localisation norms.

Since the discovery of these violations of localisation norms, vigilance has increased, and OEMs are now required to calculate domestic value addition of the EV and share their production data with the Ministry or sync their enterprise resource planning software with the GoI's portal.<sup>26</sup> This has also led to delays in the imbursement of subsidies to OEMs, causing a liquidity crunch in the industry.<sup>27</sup>

### iii. Delayed incentives for domestic manufacturing

The GoI has recently brought about production-linked incentives ("**PLI**") for the automotive and auto component sector. The scheme intends to provide companies with financial incentives to boost domestic manufacturing and attract investments in the industry.

These PLI schemes have received applications with proposed committed investments of approximately USD 9 (nine) billion<sup>28</sup> and are expected to contribute to an increase in the availability of locally produced parts and components.

However, it is important to note that despite being the third largest in production in the world, the Indian automotive market trails far behind the Chinese market, selling less than one-sixth the number of cars in 2022.<sup>29</sup> Similarly, the auto-parts industry is dominated by China, and India's market size is less than one-tenth in this area.<sup>30</sup> China is thus able to achieve higher economies of scale, and consequently produce parts that are relatively cost-effective.

Thus, while these PLI schemes are appreciated, setting up of manufacturing facilities requires substantial time, and incentives for the scheme will only be disbursed from the financial year 2023-2024. Hence, until the Indian market matures to a similar size, domestic manufacturing would not be able to replicate the Chinese economies of scale. This would hamper cost-effectiveness goals of Indian OEMs and mean that Indian products may not be priced competitively globally. The GoI has not offered any such direct supply-side incentives to cushion these elevated costs that the OEMs face.

### (b) Inadequate incentives for charging infrastructure

Charging infrastructure is vital for the growth of long-range EVs, which has not received adequate attention under FAME-II. Only 10% (ten per cent) of the total incentive outlay under FAME-II is

www.<mark>indus</mark>law.com

Mumbai

I

Hyderabad

<sup>&</sup>lt;sup>25</sup> Please refer <u>https://auto.economictimes.indiatimes.com/news/auto-components/india-short-on-ev-parts-makers-to-rely-on-chinese-imports/68457597.</u>

<sup>&</sup>lt;sup>26</sup> Please refer <u>https://fame2.heavyindustries.gov.in/WriteReadData/userfiles/MHINotificationAPI.pdf.</u>

<sup>&</sup>lt;sup>27</sup> Please refer <u>https://www.business-standard.com/industry/auto/unpaid-subsidies-worth-rs-1-200-cr-leading-to-liquidity-crisis-smev-123041800969\_1.html.</u>

<sup>&</sup>lt;sup>28</sup> Please refer <u>https://pib.gov.in/PressReleasePage.aspx?PRID=1797610.</u>

<sup>&</sup>lt;sup>29</sup> Please refer <u>https://www.livemint.com/news/india/india-becomes-world-s-3rd-largest-auto-market-report-11673164107467.html.</u>

<sup>&</sup>lt;sup>30</sup> Please refer <u>https://economictimes.indiatimes.com/industry/auto/auto-components/how-chinas-loss-is-turning-out-to-be-indias-gain-as-major-auto-oems-shift-base/articleshow/80190225.cms.</u>

Bengaluru

Chennai

Delhi & NCR



reserved for charging infrastructure.<sup>31</sup> Most of these incentives were disbursed in March 2023, more than four years after the launch of the scheme. Further, so far, mostly public sector companies have availed these incentives.<sup>32</sup>

As per GoI data, there are only 6,586 (six thousand five hundred eighty six) public charging stations in the entire country,<sup>33</sup> to keep up with demand from over 1.3 (one point three) million EVs,<sup>34</sup> which amounts to about 200 (two hundred) EVs per public charger in the country. In contrast, the international average stood at 10 (ten) EVs per public charger in 2022.<sup>35</sup> Accordingly, lack of adequate charging infrastructure has been the biggest impediment to widescale EV adoption, especially for E4Ws.

### (c) Insufficient focus on R&D

A substantial portion of FAME-I was dedicated to 'pilot projects' that focused on innovation and technological development in the field through experiments and trials. However, FAME-II is bereft of any mention of R&D altogether.

It is pertinent to note that India is trailing in terms of technological, scientific, and industrial innovation, and continues to rely on imports for its EV component needs. In fact, the issue of insufficient R&D spans across sectors, as India's expenditure on R&D is one of the lowest in the world at 0.7% (zero point seven per cent), far lower than competing economies such as China (2.1%), Brazil (1.3%), UK (1.7%) and USA (2.8%).<sup>36</sup>

Notably, the Chinese government took steps to invest in EV technologies as early as 2001 as a priority science research project in China's Five-Year Plan, the country's highest-level economic blueprint. China also championed for alternative battery technologies such as lithium-phosphate batteries, in contrast to the conventional lithium nickel manganese cobalt batteries.<sup>37</sup> This technology now accounts for almost one-third of all batteries used in EVs.<sup>38</sup>

Thus, R&D into newer technologies may lead to an early mover advantage and potential intellectual property benefits. In a rapidly growing industry like that of EVs, R&D becomes especially important. The issue of availability of domestically produced parts is inextricably linked to that of domestic R&D as well, being of fundamental importance for reducing reliance on imports, of both goods and services. Limited focus on R&D in India may stifle domestic innovation and hamper goals of self-reliance and localisation.

### (d) Lack of attention to E4Ws and commercial EVs

While the ratio of internal combustion engine ("**ICE**") four wheelers to two wheelers in India is one to five, the same ratio in EVs is one to fifteen,<sup>39</sup> highlighting the scope for growth in the E4W

<sup>31</sup> 9 Paragraph of the FAME-II scheme available at https://fame2.heavvindustries.gov.in/WriteReadData/userfiles/8th%20March%202019%20Gazette%20Notification%20FAME-II.pdf. <sup>32</sup> Please refer https://pib.gov.in/PressReleasePage.aspx?PRID=1911394, and https://pib.gov.in/Pressreleaseshare.aspx?PRID=1808115. <sup>33</sup> Please refer <u>https://pib.gov.in/PressReleasePage.aspx?PRID=1910392</u>. <sup>34</sup> Please refer https://pib.gov.in/PressReleasePage.aspx?PRID=1842704. <sup>35</sup> Please refer <u>https://www.iea.org/reports/global-ev-outlook-2023/trends-in-charging-infrastructure.</u> <sup>36</sup> Please refer <a href="https://dst.gov.in/sites/default/files/Research%20and%20Deveopment%20Statistics%202019-20\_0.pdf">https://dst.gov.in/sites/default/files/Research%20and%20Deveopment%20Statistics%202019-20\_0.pdf</a>. <sup>37</sup> Please refer <u>https://www.technologyreview.com/2023/02/21/1068880/how-did-china-dominate-electric-cars-policy/.</u> <sup>38</sup> Please refer https://www.adamasintel.com/lfp-for-the-massive-ncm-for-the-majority/. <sup>39</sup> Please refer https://vahan.parivahan.gov.in/vahan4dashboard/vahan/view/reportview.xhtml. Page 6 of 10 www.induslaw.com Bengaluru Chennai Delhi & NCR Hyderabad Mumbai I



segment. Despite the growth potential, the GoI has recently shifted the unutilized funds under FAME-II, originally designated for E4Ws, towards the budget allocated for E2Ws.<sup>40</sup> While this would allow further growth of the E2W segment, it could potentially hinder the E4W segment's growth and development.

On similar lines, heavy-duty commercial vehicles such as trucks and industrial vehicles such as tractors are major contributors to air pollution and greenhouse gas emissions. These vehicles are not covered under the current FAME-II policy.

# (e) Abrupt policy changes

Subsidies on E2Ws have recently been reduced from about USD 180 (one hundred eighty)/kWh to about USD 120 (one hundred twenty)/kWh and the cap of subsidy on vehicle cost has been reduced from 40% (forty per cent) to 15% (fifteen per cent),<sup>41</sup> entailing sudden price hikes in the sector. Similar issues were also faced in FAME-I when incentives were withdrawn from mild-hybrid EVs. These sudden policy changes may affect OEM business plans and consumer plans alike.

Other concerns under FAME-II include the lack of incentives for strong hybrid E2Ws and E3Ws, strong hybrid buses, alternative fuel-based vehicles, and e-cycles. Resultantly, demand for EVs has not kept up with the outlay of incentives, as 70% (seventy per cent) of the earmarked funds under FAME-II remain unutilised, despite the conclusion of the original stipulated period for the scheme.<sup>42</sup>

Therefore, as the FAME-II scheme is expected to conclude next year, it is important to ensure that the obstacles that were faced in the first two phases are acknowledged, understood, and overcome for the next phase of EV incentives.

### 3. NEED FOR A REVAMPED FAME-III

We understand that the GoI is in the process of considering a potential third tranche of FAME scheme in India and proposals from various stakeholders in the EV industry are currently being considered.<sup>43</sup> It is to be seen whether FAME-II will be extended, revamped, or discontinued. It is imperative for the GoI and stakeholders to learn from the challenges faced while implementing FAME-I and FAME-II, and accordingly, for the GoI to ensure that the inadequacies of the former phases are addressed in the new phase of FAME.

We have outlined in brief some of the potential areas of concern on which the GoI can focus, and potential solutions which they may adopt to overcome the existing challenges of FAME-II:

### (a) Incentives for alleviating parts procurement costs

As we have noted previously, localisation norms alone may not be able to boost domestic production. Instead, a more effective approach would be to incentivize and support the creation of

www.induslaw.com

Page **7** of **10** 

Mumbai

Bengaluru

L

Hyderabad

<sup>&</sup>lt;sup>40</sup> Please refer <u>https://energy.economictimes.indiatimes.com/news/power/govts-plans-to-reduce-subsidies-on-electric-two-wheelers-a-retrograde-step-say-industry-players/100344113.</u>

<sup>&</sup>lt;sup>41</sup> Please refer <u>https://fame2.heavyindustries.gov.in/WriteReadData/userfiles/Notification%20dated%2019%2005%202023.pdf</u>.

<sup>&</sup>lt;sup>42</sup> Please refer <u>https://jmkresearch.com/under-fame-ii-70-funds-remaining-to-be-utilized/.</u>

<sup>&</sup>lt;sup>43</sup> Please refer <u>https://timesofindia.indiatimes.com/business/india-business/fame-3-0-govt-considers-fresh-subsidy-plan-for-evs/articleshow/101711387.cms.</u>



robust local supply chains and infrastructure to allow the industry to flourish naturally. This can be achieved through various means such as via PLI schemes, capital subsidies and credit facilities for investors.

However, as noted previously, the gains from these schemes may only be noticed a few years down the line, when manufacturing processes achieve economies of scale comparable to the Chinese counterparts. Until such time, the GoI may consider providing direct incentives to automotive part manufacturers to subsidise the pricier Indian parts, as well as to boost local parts production.

At the same time, it is important for both these schemes to run parallelly and complement each other, such that there are enough domestically produced components to support a thriving EV industry, and vice versa. This would foster the development of advanced production capabilities, improve the quality of locally made components, and reduce overall costs, benefiting both OEMs and consumers.

### (b) Incentivizing charging infrastructure

Charging infrastructure serves as the backbone of the EV industry and requires urgent attention from the GoI. Rather than focusing charging infrastructure incentives to public sector companies alone, the GoI should consider incentivising the private sector to build charging infrastructure, which is often recognised for its proactive approach towards innovations and agility to market changes. Companies such as Tesla and ChargePoint have shown us that major innovational strides can be made in the charging infrastructure business. Thus, it is important to look at charging infrastructure from a wider lens, acknowledging the unique strengths that both sectors bring to the table.

In this regard, capital subsidies may be encouraged for private entities, or low/nil-interest loans may be offered since high upfront investments are required for setting up large-scale charging stations.

# (c) Dedicated incentives for R&D to reduce reliance on imports

Allocating dedicated funds and incentives for EV-related R&D projects to domestic companies, academia and research institutions would encourage domestic companies to invest in innovation and technology development. For example, several countries such as Australia, France, Germany, Spain, the UK and the USA have invested into hydrogen R&D programmes.<sup>44</sup> Similarly, South Korea has created a KRW 80 (eighty) billion fund to assist small and medium-sized companies in R&D spending.<sup>45</sup>

In India, companies such as Ola have been seen to be keen to research in the sector, and the GoI may consider partnering with such businesses to leverage their respective strengths. Several global

<sup>&</sup>lt;sup>45</sup> Please refer <a href="https://www.bnnbloomberg.ca/a-35-billion-plan-for-korean-ev-battery-giants-to-catch-china-1.1626599">https://www.bnnbloomberg.ca/a-35-billion-plan-for-korean-ev-battery-giants-to-catch-china-1.1626599</a>.

www.induslaw.com								Page <b>8</b> of <b>10</b>
Bengaluru	1	Chennai	1	Delhi & NCR	1	Hyderabad	1	Mumbai

<sup>&</sup>lt;sup>44</sup> Please refer <u>https://www.iea.org/reports/global-hydrogen-review-2022</u>.



automotive companies such as Marelli, Volvo and Daimler Trucks have recently set up R&D centres in India as well.<sup>46</sup> It is imperative that these companies are supported in their endeavours.

Recently, the Anusandhan National Research Foundation Act, 2023 was passed by the Indian parliament, which aims to provide strategic direction for research, innovation, and entrepreneurship, by spending approximately USD 6 (six) billion over five years across sectors.<sup>47</sup> It is yet to be seen how much of this fund would be devoted towards the EV industry.

By fostering a culture of research-driven innovation, India can reduce dependence on foreign technology imports, allow for lower EV costs, and ensure a holistic development of the sector.

### (d) Expansion of scope of incentives to E4Ws and commercial vehicles

The GoI should thoroughly investigate the reasons behind the underutilization of funds dedicated to E4Ws and promote their adoption, rather than to direct the funds elsewhere. Expansion of E4W incentives would also positively contribute to demand for charging infrastructure in the country.

Dedicated incentives may also be allocated to commercial vehicles such as trucks and industrial vehicles such as tractors. In particular, vehicles such as last-mile delivery logistics trucks and farm equipment are used generally within confined areas and are suitable for electrification.

Apart from the aforementioned opportunities, the GoI should also consider incentives for alternative fuel vehicles such as hydrogen fuel cell EVs, end-of-life EV management, and ensure a transparent, proactive and consistent policy framework to boost investor confidence.

### 4. CONCLUSION

To conclude, it is evident that the promotion of EVs and the development of a robust EV ecosystem in India requires a multifaceted approach. While initiatives like the FAME-I and FAME-II were steps in the right direction, they faced critical shortcomings that need to be addressed to ensure a successful transition to EVs.

As we have highlighted, the development of a robust and accessible charging network is crucial for overcoming range anxiety and encouraging EV adoption. Simultaneously, investing in R&D initiatives is essential to drive innovation, improve performance, and reduce costs, fostering the growth of indigenous EV technologies and components. While localisation norms aim to boost domestic manufacturing, they should strike a balance between mandating usage and ensuring component quality and cost-effectiveness, to avoid potential challenges for OEMs and suppliers. These measures should go hand-in-hand with other potential opportunities such as higher incentives for commercial vehicles, E4Ws, and alternative fuel-based vehicles.

By addressing the shortfalls observed in the previous phases of FAME and adopting a cohesive strategy, India can establish itself as a global leader in electric mobility. A strong commitment from the various

46 I	Please	refer	https://www.marelli	i.com/m	arelli-expands-innovati	on-capab	ilities-with-a-new-tech	nical-rd-center-in-bangalore/;
https:/	https://www.volvogroup.com/en/news-and-media/news/2022/mar/r-and-d-operations-in-india.html;							
https:/	/media.d	aimlertruc	k.com/marsMediaSite	e/en/ins	stance/ko/Daimler-Tru	ck-launc	nes-Innovation-Center-	in-India.xhtml?oid=51896757.
47 Pleas	e refer <u>ht</u>	tps://dst.	<u>gov.in/lok-sabha-pass</u>	es-anusa	ndhan-national-researc	h-founda	tion-bill-2023-moved-u	<u>inion-minister-dr-jitendra.</u>
www.induslaw.com								
Be	engalur	u	Chennai	1	Delhi & NCR	1	Hyderabad	Mumbai



stakeholders in the industry is required for overcoming the challenges faced in FAME-II and encouraging the adoption of EVs in India.

Authors: Saurav Kumar | Swathi Sreenath | Ritvika Thakur | Kajal Kashyap | Suyash Bajpai

Date: 12 September 2023

Practice Areas: Mergers & Acquisitions, Corporate and Commercial, Automotive

### DISCLAIMER

This article is for information purposes only. Nothing contained herein is, purports to be, or is intended as legal advice and you should seek legal advice before you act on any information or view expressed herein.

Although we have endeavoured to accurately reflect the subject matter of this article, we make no representation or warranty, express or implied, in any manner whatsoever in connection with the contents of this article.

No recipient or reader of this article should construe it as an attempt to solicit business in any manner whatsoever.

www.induslaw.com								Page <b>10</b> of <b>10</b>		
Bengaluru	T	Chennai	I.	Delhi & NCR	1	Hyderabad	T	Mumbai		