

India Germany Joint Working Group on Automotive Sector

Minutes of the

7th Meeting on 4.2.2014

New Delhi, India

1. Mr. Ambuj Sharma, Additional Secretary, Department of Heavy Industry, Government of India, & Co-Chair, JWG, accorded a warm welcome to the Joint Working Group members and other participants. Expressing gratitude on behalf of the Indian delegation that had visited Frankfurt to participate in the 6th IGJWG meeting, he placed on record the deep appreciation for the courtesy and the warm cordiality that was extended. Then, providing an overview of the automotive industry in India, Mr. Ambuj Sharma spoke about the current year's downward trend of the automotive industry, hoping that the Auto Expo (automobile exposition 6-11 February, 2014, Greater NOIDA, India) may be instrumental in improving market sentiment by showcasing new launches and concepts of modern-technology cars and other vehicles, including electric/hybrid vehicles, and by providing a meeting ground for auto designers, innovators, marketing experts and policy makers. He highlighted the excellent progress in the Indo-German Joint Working Group in the Auto Sector. Outlining the achievements

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under the Auto Mission Plan 2006-2016, he said that the auto industry grew significantly; posting a turnover of around US \$ 70-75 Bn, and with the current trend, it is hoped that approximately 80% of the overall target will be achieved at the end of its term. Current slowdown in the market might lead the Indian industry to fall behind the AMP target of turnover reaching US \$ 145 Bn., more than 10% contribution to GDP and 16 million incremental employments etc. The Govt. and industry are in the course of reviewing the AMP performance, and, at the same time, have started the exercise for drafting the new Automotive Mission Plan, AMP-II, (2016-2026) for which consultations with industry and knowledge partners have started. It is time to incorporate new ideas, new learnings and the emerging requirements in the automotive sector. It is hoped that India will come out with a draft plan for the AMP II during the second half of this year. However, the department has been deeply engaged in formulating a bold doctrine for ushering a clean transportation solution in India through electric and hybrid mobility. The department is also engaged in discussion with partners in the government and industry on the subject of emission norms for the short and medium term, End of Life of vehicles, skills upgradation etc.

1.1 A round of introduction of delegates from both sides followed.

2. Mr Dirk Inger, Co-Chair, JWG, in turn, welcomed the participants and thanked India for the kind invitation to the meeting of the Joint Working Group. Expressing happiness on attending this group, he conveyed the greetings of Dr. Steinle who could not attend the session. Mr. Inger highlighted the importance of and the need to focus on the emerging alternative drive train technologies and other areas where innovative approaches are required in the auto sector, while expressing confidence on the continuation of India-Germany cooperation in these and other areas. Mentioning the challenges before the global auto industry in general and the European and the German auto industries in particular, he focused on environmental challenges in transport and future fuel. The interest in Germany is high how these issues are tackled, elsewhere as well as in India. There has been a rich exchange of ideas and experience with India under the aegis of the JWG. He also commended the constructive role played by India in WP 29 deliberations in Geneva while expressing hope that there will be further progress in the discussions. He concluded by wishing all the participants a good meeting.

3. The minutes of the 6th meeting of the JWG, held in Frankfurt on 12.9.2013, were adopted.

4. The group then adopted the agenda for this meeting and took upon the same for consideration.

5. First Topic: Electric Mobility

5.1 India Presentation: Mr. Ambuj Sharma explained the status of electric mobility initiatives in India. Mr. Sharma acknowledged that the German initiative has provided a lot of learning on this subject. The National Electric Mobility Mission Plan (NEMMP 2020) emerged after a rigorous exercise including field study, stakeholders' consultations, interaction with consumers etc., leading to the creation of an analytical report. The take away from the exercise was that there are a host of issues waiting to be addressed before such a paradigm shift towards a bold new transportation model is adopted. Foremost among them is the issue of high acquisition cost, which at the moment is a hindrance before the OEMs who are reluctant to introduce xEV models in the Indian market. Range anxiety, load capacity, speed pick up and battery-charging infrastructure facility are some other crucial issues. Providing a brief introduction to the basic features of the program, he stated that as the government is committed on the shift towards clean mobility, it has decided to support the individual purchase of xEVs by providing demand incentives as this is one of the more potentially successful

intervention mechanisms. Creation of charging infrastructure is also an important area, where elaborate work has to be done.

5.2 Elaborating on the pilot schemes of Electric Vehicles in Delhi for last mile connectivity to the commuters who use Metro Rail services by way of running a fleet of battery operated 4 seated and 7 seated vehicles of the Light Commercial Vehicle category, he informed that in the first phase of the pilot project, approximately 40-50 pure electric vehicles would be bought by the Delhi Transport Infrastructure Development Corporation, and in turn leased to various companies including Govt. companies and offices, which could use them for ferrying their employees between residence and office or for other official work. Department of Heavy Industry will provide necessary funds to cover the viability gap, in the operational expenses vis-à-vis diesel cars normally hired by companies. In the next phase, light commercial 4 seaters and 7 seaters will be operated along with cars as taxis, feeder vehicles for metro rail, tourism operators, for hotels etc. Five more states have responded positively to start pilot projects in the next three months' time. Pilot projects will provide a valid ground for decision making at the highest level for the final and full implementation of the NEMMP 2020.

5.3 Mr. Sharma also mentioned about the close dialogue with institutions such as Fraunhofer that could collaborate with Centres of Excellence for E-Mobility. Other R&D areas where such

collaboration can be explored are motor, battery and battery management system, power electronics, standards & regulations, integration of solar charging in electric mobility etc. Need for Joint projects of technology development at governmental and institutional level and Joint Studies were also highlighted during the presentation.

5.4 German Presentation: Mr. Dirk Inger stated that the customer is the focus of the whole electric mobility exercise. Business models with reference to public charging infrastructure is another area that is engaging everyone's attention these days. So far a satisfactory business model for public charging is yet to be discovered. Another focus of today's activities is the transition from R&D to market uptake. The Federal Government of Germany has declared its Electric Mobility Programme 2011 as a priority area. Under this programme, the Federal Government has provided additional 1.00 billion euro for current R&D projects. Further instruments of this programme are electric mobility show cases, support for enhanced university/vocational training, advancing international standardization and harmonization. The government will also provide further exemptions for the motor vehicles tax and company car tax. Some non-monetary incentives i.e. a framework for dedicated parking lots and assessment of joint use of dedicated lanes are also part of electric mobility programme 2011. Also, the Federal Government has formed a National Platform for Electric Mobility

(NPE) which has submitted so far three reports. The next status report including a "systemic approach" of various aspects on Electric Mobility is awaited this year. Seven task forces under NPE have been constituted to study various aspects of electric mobility i.e. drive train technologies, battery technology, charging infrastructure and grid integration, norms, standards, certification, materials and recycling, qualification and policies & regulation. Further, for development of electric mobility in Germany, model regions for electric mobility (BMVI) have been selected. Under this programme, electric vehicles will be provided for individual and public transport (82 electric and hybrid buses) with main focus on user acceptance (i.e. vehicle, infrastructure, and new mobility-systems), safety and regulations. Four show cases of electric mobility are running since 2012. Based on the positive experience of the Model Regions, comprehensive research and demonstration regarding technological innovation in practice, charging infrastructure, impact on the energy system, user acceptance, business models etc. will be done. Action has been initiated under BMVI for development of legal framework, and network building between experts/regions/industry and academia in programs. He informed that in National Innovation Programme (NIP), an amount of 1.4 billion Euro will be utilized during 2007-16. A follow up programme "NIP II" is also under development. In phase I, 15 hydrogen filling stations have been established across the country and in Phase II, Germany will expand nationwide network of

hydrogen filling stations from 15 to 50 by 2015 and this number will go up to 400 until 2023. Partners of the "H2 Mobility Initiative" have finalized a concrete action plan and signed a term sheet in October 2013 for building up a nationwide network for hydrogen filling stations for fuel cell vehicles.

6. Second Topic : Alternate Fuel

6.1 German Presentation: Mr. Dirk Inger made a presentation on the mobility and fuels strategy of Germany. He informed that the Federal Govt. of Germany has fixed several targets to reduce greenhouse gas emission by 70% by 2040 as compared to 1990. He also said that renewable energies are to achieve an 18% of share of gross final energy consumption by 2020 and 60% by 2050. The target for reduction of final energy consumption in the transport sector is about 10% by 2020 and about 40% by 2050 in comparison to 2005. The German Federal Government has initiated action to reduce the energy consumption of transport through several programs and activities. The Federal Government is promoting the use of cleaner fuels i.e. Natural Gas & sustainable bio-fuel, the use of new energy carriers i.e. electricity & Hydrogen and also encouraging the use of new technology i.e. EV's with batteries and fuel cells. He further added that the implementation of a comprehensive future oriented sustainable fuel strategy is required

for transforming the energy sector, including transportation. A global technology approach is also needed for it.

6.2 Indian Presentation: Shri. S.S.Thipse, GM, ARAI made a presentation on ARAI. He informed that ARAI has been established in 1966 as a “center of excellence” for alternative fuel power train and vehicle development of International repute. ARAI does R&D in emission development on engine & vehicle basis, preparing Draft standard & Notification formulation, Safety measures for CNG / LPG systems and providing training. He informed that Competency Projects have been completed by ARAI for CNG Euro-V MPFI Engine, HCNG Engine, Diesel-CNG Dual Fuel Engine and HCCI Engine. He added that ARAI is now working on new Projects for IGWG Collaboration in the field of Direct Injection Technology CNG Engine Development, Development of Hydrogen engine and fuel cell vehicles, Second generation bio-fuel applications and DME automotive engine & gen-set development. More research work is required to develop safe, durable and cost effective indigenous technology for electric mobility.

6.3 Commenting on the status of ethanol blending in India, Mr Ambuj Sharma stated that non uniform production across the country and difficulties in inter-state transportation of ethanol are some of the bottlenecks in India. Mr Inger also mentioned some practical difficulties in popularising CNG in Germany. Mr Ambuj

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Sharma asked ARAI to come up with concepts developed in more focused manner for any joint collaboration in the field of alternate fuel technologies with institutions in Germany.

7. Third Topic: Radio Frequency Regulations for Radar Based Driver Assistance System

7.1 German Presentation: Mr. Sanjeev Mandpe made a presentation on Automotive Radar. He mentioned that road accidents remain a major health threat worldwide. About 1.2 million people die in road accidents every year, more than 50 million people are injured. In 2004, road accident ranked number nine on the list of death of causes. About 50% of road accident victims are vulnerable road users, e.g. motorcyclist, three wheelers, cyclists, pedestrians. In recent years, radar-based driver assistance systems have helped to improve road safety in many countries worldwide. Radar sensors monitor the vehicle surroundings and if a collision risk is detected, the system initiates preventive actions e.g. by alerting the driver or by initiating steering or breaking interventions. In Germany, road safety has improved by Driver Assistance Radar Systems. These Radar sensors operate in the frequency bands-24.05-24.25GHz, 24.25-26.65GHz, 76-77 GHz & 77-81 GHz with very low transmission powers. It works in all light conditions and in most weather conditions. It has detection range of 30 meters to 250

meters. However, in India, these frequencies are not available due to radio spectrum regulations. He added that Radar based driver assistance systems are offered by many automobile manufacturers today but the vehicle radar frequency bands 24.05-26.65 GHz, 76-77 GHz and 77-81 GHz are not de-licensed in India and these frequency bands need to be de-licensed in India before they can be used for certain applications. A request was made to the participating government officials to support the automobile industry in de-licensing the requested frequencies and take up on the agenda for future follow up.

7.2 Indian Response: Mr. Ambuj Sharma mentioned that the concerned stakeholders should take this forward and check the possibilities. Mr. Sanjay Bandopadhyay informed that frequencies generally used are with the Ministry of Defense. The frequencies mentioned here will also follow the same channel of distribution, like done for anti-theft devices, where the end supply will come from the Department of Telecom as per their existing policies and as per their terms and conditions. The work of de-licensing is in the domain between MOD and DOT. Accordingly, this issue will be passed to those agencies for resolution.

8. Fourth Topic: End of Life

8.1 German Side : Mr. Michel Poznanski-Eisenschmidt, Director Technical Office Volkswagen India, informed that the UN-ECE-Regulation on recyclability of motor vehicles has been approved by UN in November 2013. He mentioned that vehicle recycling consists of two separate aspect i.e (i) Type approved (new vehicle type recyclability rate theory) and (ii) treatment of end-of-life vehicles (end of life vehicles, waste treatment real life). The time gap between both topics is 15 years and more. The treatment of End of Life Vehicles depends on the local situation and therefore is different from one country (or region) to another. In Europe, ELV treatment is done at industrial level with automatic machines whereas often manual ELV-treatment is done in other countries. ELV legislation mainly is dealing with activities of recycling companies and not addressing automobile industry, but the recycling sector. ELV desolation may take the different situation into account and therefore could be different from one region to another. He further mentioned that Type-Approval Recyclability is dealing with theoretical recyclability and recoverability of vehicles based on their material composition. Legislation on type approval recyclability is addressing the automobile Industry (OEM)s and suppliers.

8.2 He further mentioned that in Europe Type Approval Recyclability has been regulated in Directive 2005/64/EC, amended by 2009/01/EC. The core element of type approval recyclability is

the calculation of the recyclability and recoverability rate according to ISO 22628. This calculation is based on data for every part of a vehicle. These data are collected along the supply chain via IT-systems, mainly IMDS/international material Data system). Type approval Recyclability is a virtual approval without any hardware testing by technical services. It is based on ISO 22628, so the calculation method is already globally harmonized. He mentioned that German side expected that UN Recyclability-Regulations will also be implemented in countries which have not joined the UN 1958-agreement. German OEMs propose to implement the UNECE-Recyclability Regulation also in India. Mr. Inger underlined that in case of export India would have to fulfill the regulation anyway.

Dr. Dieter Mutz, GIZ India (Indo-German Environment Partnership, IGEP, Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ) added that GIZ would also support in this field and offer seminars in resource efficiency.

8.3 Indian Side: Shri K.K.Gandhi of SIAM mentioned that as a part of Indian Standards formulation process, the SIAM draft regulation is being taken up in the Automotive Industry Standards Committee (AISC) for taking the subject ahead. He suggested that Inspection and Maintenance systems need to be strengthened to

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identify end-of-life vehicles. Also, Small scale localized scrapping units need to be set up on a country wide scale.

8.4 Shri Ambuj Sharma viewed that ELV being a multi-disciplinary subject different Ministries are expected to play a vital role in implementation of ELV regulation. He informed that a core group has been constituted under the Inter-Ministerial Group on End-of-life vehicles by Department of Heavy Industries (DHI) to prepare the groundwork and submit recommendations for developing End-of-Life regime in the country to the DHI, from time to time for consideration. He observed that basically 3 levels of intervention are required: vehicle level, regulatory, and, scientific facilities for dismantling.

8.5 He stated that in India, there is a large unorganized but flourishing dismantling industry and instead of creating new facilities to replace all such activities, there is a need to build upon the existing sector by offering scientific, efficient and hazard free solutions to their business process.

8.6. NATRIP/ARAI: Capacities are needed to understand the consequences of the UNECE regulations. The UNECE-Regulation on recyclability first has to be analyzed. In general testing infrastructure in India goes into a direction to be able to adopt 1958-regulations.

9. Fifth Topic: Skill Development

9.1 Mr. Sunil K Chaturvedi, CEO, Automotive Skill Development Council (ASDC) made a presentation on Indian Automotive Industry Skill Development. He stated that India is already one of the largest auto markets in the world, however, there is still a huge room for growth. At present, almost 18 million people are employed in automotive industry in India and projected industry growth expected to create 25 million jobs but there are qualification gaps all across the value chain in auto sector. These gaps may also enlarge for new emerging technologies and process like electric mobility, end of life etc. There is also a large gap in terms of quantity such as availability and requirement for drivers. Thus, there is a need for skilling process to match up the requirement.

9.2 Mr Sunil Chaturvedi further stated that skills required by automotive sector cover the entire value chain like manufacture skills (welding, machining, assemble etc.), design, product and process, engineering skills, marketing and sales of vehicles, customer support, repair, servicing and maintenance of vehicles, insurance & financing, logistics e.g. freight movement and passenger transport, skilled drivers etc. He further added that the main activities of ASDC are creating standards for identified needs, partnering with training center, creating academies of excellence,

training of teachers, examination & certification, partnering with central and state government ministries & agencies, partnering with academic institutions in India and abroad.

9.3 He informed that ASDC has so far successfully completed initial pilot project in development of curriculum standard, providing training to teacher, conducting validation batch and examination etc. He further mentioned that ASDC has planned to set up 10-15 Academies of Excellence to support the large number of training delivery centers across the country. He mentioned that Germany has a great legacy of Industry and Training Centres working closely and suggested that few academies could be set up with German partners, especially in R&D/engineering and manufacturing domains in India.

9.4 Mr Klaus Braunig, Managing Director, VDA, agreed that skill development should be a continuous process as the skilled population is an asset for the economy. VDA and especially VDA-QMC (VDA-Quality Management Center) is making a lot of contribution in the field of skill development and Indian manufacturers or ASDC are free to directly establish contact with VDA and VDA-QMC.

9.5 Mr. Steinruecke of Indo German Chamber Of Commerce talked about skill development efforts made by the Chamber and other public-Private Partnership training programs involving companies,

Government and the Chamber (IGCC). It was agreed that institutions and agencies involved in skill development in auto sector on both sides shall continue to interact closely to explore and pursue avenues of collaboration and joint working in this important area.

10. Conclusion: Mr. Dirk Inger thanked all the delegates and other participants for a fruitful meeting and invited the Indian delegation for the next meeting in Germany. He also mentioned that there are certain issues i.e how to integrate Electric Vehicles charging with solar energy which could be elaborated in the next meetings. He informed that Mr. Frank Juergen is available at the German embassy in Delhi for any follow up. The next meeting of the working group could take place at the IAA in Hannover in September 2014.

11. Shri Ambuj Sharma concluded the meeting by thanking the participants for a fruitful discussion and invited all to visit the 12th Auto-Expo 2014 (6th-11th Feb) and visit the different stalls including the Hybrid Electric Pavilion. He also informed the participants about different activities and events being organized on the sidelines of the expo and invited the delegates to interact with the Indian industry and organizations like SIAM and ACMA for a useful exchange of ideas. SIAM, ACMA and other organizations are organizing many conferences where are also being participated by

German experts/delegates. He hoped that, in future also, **Indo-German Joint Working Group** will be providing necessary platform for bilateral cooperation between the two nations.

The meeting ended with a vote of thanks to the Chair.