



SUSTAINABLE TRANSPORT FORUM: SUB-GROUP ON A COMMON DATA APPROACH FOR ELECTROMOBILITY AND OTHER ALTERNATIVE FUELS

TERMS OF REFERENCE

1. INTRODUCTION

On 23 April 2015, the European Commission established the Sustainable Transport Forum ('the STF') by Commission Decision C(2015)2583 (the 'STF establishment decision')¹. By Commission Decision of 9 December 2020², the STF has been renewed until 31/12/2030 (the 'STF renewal decision'). The STF supports the implementation of Directive 2014/94/EU on the deployment of alternative fuels infrastructure³ with technical expertise.

Under Article 5(2) of the STF establishment decision and Article 8 of the STF renewal decision, DG MOVE is entitled to set up sub-groups to prepare and support the work of the STF.

On this basis, DG MOVE has set up a sub-group on a common data approach for electromobility and other alternative fuels ('the sub-group').

Electro-mobility is experiencing a new market phase where availability and access to high-quality data becomes essential to deliver new services and product features and hence support the mass market transition. Interoperability is essential in this regard. In a mass market of millions of vehicles and charging points it becomes essential to better connect users and infrastructure through seamless user-centric solutions. In this scenario, advanced digital services are the cornerstone of the market, which highly depend on the data that is continuously generated within the ecosystem and, sometimes also enriched by external sources. In a similar fashion, other alternative fuels (H₂, CNG, LNG, highly blended biofuels) will also have to develop their own data ecosystems that fulfil their specific market demands. On this basis, DG MOVE has decided to take action.

1.1. Context

Data is an intangible and measurable asset for the emerging electric mobility services market. It is a prerequisite for manifold user services, such as payment, billing and energy related services that can generate significant economic value. Yet, the conditions for exploiting the all these benefits are not fully developed in the electro-mobility sector, both in terms of collecting

¹ Commission Decision C(2015)2583 final of 23 April 2015 on setting-up an expert group on alternative transport fuels ('the Sustainable Transport Forum').

² Commission Decision of 9 December 2020 on renewing the group of experts on alternative transport fuels ('the Sustainable Transport Forum') – C(2020)8535 final.

³ OJ L 307, 28.10.2014, p. 1, Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure.

and communicating data available as well as mapping and valuing them for business-to-business (B2B) and business-to-consumer (B2C) purposes.

Although the market is still nascent, the recharging and refuelling infrastructure deployed today has to start including relevant data quality requirements that will allow the creation of a common and interoperable data infrastructure that can underpin new business models. In practice, this implies that infrastructure has to be capable of *sending* static and dynamic data in real time, thus enabling the interoperable flow of information to its back-ends and ultimately with those market actors, which are dependant of these data to fully develop their services. The real time *reception* of steering commands and data by the infrastructure will play an important role in enabling new services and steering recharging processes in terms of demand-side management. In this regard, bidirectional flow of data is also an essential pre-requisite for the operationalisation of vehicle-to-grid power flow.

But it is also necessary that the data shared is fully interoperable and of sufficient data quality (coherence). If done rightly, based on broadly accepted standards, this will create the condition for a vastly flourishing market. If done wrongly, it can lead to market fragmentation and lack of interoperable user services that hampers the needed market uptake of those vehicles.

1.2. The challenge ahead

A wide variety of stakeholders are involved in this discussion, including OEMs⁴, EMSPs⁵, CPOs⁶, e-roaming platforms⁷, data brokers⁸, DSOs⁹, TSOs¹⁰, charging aggregators¹¹ and traditional fuel suppliers. In addition to publicly accessible infrastructure, recharging points at private dwellings and business buildings will also have a big influence in the smartness of the ecosystem mentioned above, making crucial to develop a consistent technological framework. All these actors will shape the future data ecosystem, in the one or other way, conditioning charging infrastructure producers and operators globally, to include the relevant standards and

⁴ OEMs or Original Equipment Manufacturers are to be understood as automotive manufacturers in this context.

⁵ EMSPs offer an ample variety of services to the users. Currently, their role as enablers for contract-based payment services is noteworthy.

⁶ CPOs or Charge Point Operators are entities responsible for the management, operation and maintenance of one or more recharging points. The role of CPO can include both the administrative operation (e.g. access, roaming, billing to EMSP etc.) and technical maintenance of the recharging points.

⁷ E-roaming platforms are central organizations connecting multiple electromobility market players. They are responsible for contractual clearing and enabling electromobility services between the connected actors and end consumers.

⁸ Data brokers collect data on alternative fuels infrastructure, carrying out data quality and aggregation activities for their clients and re-using these data with other industry actors and public authorities.

⁹ DSO or Distribution System Operator is the organization that designs, operates and maintains the public distribution grid through which recharging spots are supplied. The recharging points are connected to a private grid (home, building, installation site...) connected to DSO grid through a delivery point.

¹⁰ The TSO or Transmission System Operator is responsible for a stable power system operation (including the organisation of physical balance) through a transmission grid in a geographical area (his control area). The System Operator will also determine and be responsible for cross border capacity and exchanges. If necessary, he may reduce allocated capacity to ensure operational stability. Transmission as mentioned above means "the transport of electricity on the extra high or high voltage network with a view to its delivery to final customers or to distributors. Operation of transmission includes as well the tasks of system operation concerning its management of energy flows, reliability of the system and availability of all necessary system services". (definition taken from the ENTSO-E RGCE Operation handbook Glossary).

¹¹ Charging aggregators work as a commercial middleman allowing EV charging at the lowest cost while complying with technical constraints derived from DSOs and TSOs. Their influence is expected to increase as smart and bidirectional charging services expand in the market.

protocols in their products. It is hence opportune for DG MOVE to form a sub-group of the STF bringing together various expert representatives to exchange views and formulate recommendations on pertinent open topics with regard to data and interoperability in the electric mobility ecosystem.

In this context, the links between the use of data for supporting B2B and B2C interactions in the markets need to be linked to the use of data when reporting to Member States' (B2G), from which the data is gathered and made available through the National Access Points (NAPs) as established in the Directive 2010/40/EU on Intelligent Transport Systems¹². In this respect, this sub-group will build on the ongoing work developed under the Program Support Action (PSA) on data collection related to recharging/refuelling points for alternative fuels and the unique identification codes related to e-Mobility (IDACS) on data collection related to recharging/refuelling points for alternative fuels and the unique identification codes related to e-Mobility actors. Furthermore, the use of data for other policy relevant reporting exercises will also need to be reflected.

For a successful introduction of seamless services everywhere in the EU, incumbent and traditional players will be in the inevitable situation to simultaneously compete but also cooperate among themselves and with public authorities. This implies specific challenges of governance and market action.

2. SUBJECT MATTER

The sub-group on a common data approach for electromobility and other alternative fuels ('the sub-group') is set up.

3. MISSION

The sub-group's mission shall be to assist the Commission in mapping and further understanding the elements to formalise, and to put in place an open data ecosystem for electromobility in a first phase and for other alternative fuels (H₂, CNG, LNG, highly blended biofuels) in a second phase, based on their specific market needs and intrinsic operational and technical characteristics.

The main focus of the sub-group shall be to review and define roles and possible responsibilities for the different market actors. Further, the sub-group shall analyse and make suggestions on how to further develop the different data dimensions and their implications as part of the data value chain for electric mobility and later on other alternative fuels, with a special focus on data aggregation, data quality, data sharing and data reusability. In addition, the group shall take stock of and work on identification of the technical specifications required to implement new technologies such as smart and bidirectional charging (V2G).

The sub-group shall also discuss the coherence and possible compatibility of this data ecosystem with other data ecosystems, such as e-commerce, banking, insurance, telecommunications, and other sectors that may play in the future a critical role in enabling new services for users which can be dependent on data related to the pair vehicle-infrastructure.

Ultimately, the objective pursued by the Commission with this sub-group is to build a European level playing field, to develop an agile and data-driven ecosystem for alternative fuels infrastructure and vehicle fleets, addressing the following specific challenges:

¹² OJ L 207, 6.8.2010, p. 1–13

- Formalisation of a value proposition for market players to share the data required to create a dynamic and vivid ecosystem that meets user needs.
- Definition of the different data dimensions in support of an open market with clear roles and responsibilities for the different market actors.
- Identification of the technical specifications required to implement new technologies such as smart and bidirectional charging (V2G).
- Encourage synergies and partnerships among the different market actors to trigger competitiveness and innovation.
- Underpinning the European Union's dedication to establish fair and successful international standards in support of an interoperable alternative fuels market for infrastructure and vehicle fleets.

4. TASKS

The sub-group's tasks shall non-exclusively encompass:

1. to review existing and expected challenges of technical and regulatory nature concerning data quality and interoperability, including implications for the standards- and protocols-ecosystem in view of the revision of the Directive (EU) 2014/94 on the deployment of alternative fuels infrastructure (AFID) and its subsequent implementation;
2. to review and map the roles and responsibilities of the different market actors within the ecosystem;
3. to assist the Commission in the characterisation of the different data dimensions (aggregation, quality, sharing, reusability, etc.) required to enable the future creation of new digital services in the alternative fuels market, building on existing policy and technical work such as the one carried out under the PSA IDACS;
4. to assist the Commission in the identification of security vulnerabilities, proposing technical solutions that prevent future cyber threats targeting the electromobility ecosystem as well as other alternative fuels directly affecting confidentiality and privacy of user information (i.e. identity, location, payment information, etc.);
5. to assist the Commission in the identification of future needs concerning static and dynamic data types for the different fuels and vehicle types (e.g., LDVs vs. HDVs) and related needs and concepts for the localization, booking, payment and billing process of recharging/refuelling alternatively fuelled-vehicles;
6. to assist the Commission in the determination of those data requirements and technical specifications required for the implementation of smart and bidirectional charging (V2G), considering the particular role of charging aggregators;
7. to assist the Commission in the formalisation of the different elements proposed for a data ecosystem for electro-mobility and, in a second phase, for other alternative fuels as concluded by the sub-group;
8. to discuss, in view of the outcomes of the above discussion points, the needs for standardisation, building on ongoing work of the European Commission and the relevant European and International Standardisation Organisations; and

9. to assist the Commission in the preparation of secondary legislation if required to do so.

5. DELIVERABLES AND TIMETABLE

The sub-group's work is expected to start at the beginning of 2021. The sub-group has not a predefined timeline. In consequence, the duration would be adjusted accordingly based on the members' predisposition and the existing market and regulatory needs.

The sub-group shall report to the plenary meetings of the STF. The reporting shall consist of a concise description of the progress of the tasks, escalating all relevant technical and political aspects, which might benefit from a wider discussion, with the members of the plenary of the STF. To facilitate this process, the sub-group shall appoint a rapporteur who shall participate in the STF plenary meetings, informing about the progress and issues encountered.

The work organisation and the corresponding deliverables shall be divided in two different parts: first, the definition and formalisation of the data ecosystem for alternative fuels vehicles and infrastructure; second, the discussion and identification of specific data needs for the different fuels and vehicle types, fostering the creation of new digital services and the implementation of smart charging technologies.

The sub-group's deliverables shall non-exclusively include:

1. the identification of technical specifications and policy requirements to put in place a data ecosystem for electro-mobility and other alternative fuels (H2, CNG, LNG, LPG and highly-blended biofuels), which includes the definition of roles and responsibilities of the different market actors as well as the implications of the different data dimensions (aggregation, quality, sharing, reusability, etc.).
2. the determination of static and dynamic data types to effectively implement an open data ecosystem, covering the needs of both users and transport operators, as well as grid-operators, for the different recharging/refuelling solutions and vehicle fleets.
3. the identification of technical specifications and drafting of policy recommendations to operationalise smart and bidirectional charging attending to their specific data needs for the pair vehicle-infrastructure as well as the influence of other adjacent such as energy aggregators.

A detailed roadmap with a set of deliverables based on the specific needs identified by the sub-group members shall be defined, in agreement with DG MOVE, and attached to the Terms of Reference of this sub-group. The roadmap shall be drawn up following the first meeting of this sub-group, and will be updated every year in accordance with the deliberations at the first meeting of the sub-group in that calendar year.

6. CONSULTATION

1. DG MOVE may consult the sub-group on any technical matter relating to the interoperability and communication exchange of the recharging/refuelling infrastructure.

2. DG MOVE may consult the sub-group on standardisation needs for vehicle-to-grid communication, including the development of new standards and protocols as well as the harmonization and convergence of existing ones.

7. MEMBERSHIP

1. The sub-group shall be composed of up to 30 members.
2. Members of the sub-group are:
 - (a) organisations in the broad sense of the word, including companies, associations, Non-Governmental Organisations, trade unions, universities, research institutes, law firms and consultancies, active in or working on alternative fuels or related infrastructure and vehicles and/or active in or working on the provision, collection, quality control and/or processing of data generated by or relating to alternative fuels infrastructure and/or active in or working on intelligent transport systems more generally ('Type C members');
 - (b) Member States' authorities, at national, regional or local level ('Type D members');
 - (c) other public entities, such as Union bodies, offices or agencies and international organisations ('Type E members').
3. The sub-group can have up to a maximum of 20 Type C members; DG MOVE reserves the right to appoint fewer than 20 Type C members.
4. Organisations, Member States' authorities and other public entities shall nominate their representatives considering their suitability with regard to the purpose of the sub-group and ensuring that their representatives provide a high level of expertise. DG MOVE may refuse the nomination by an organisation of a representative if it considers this nomination inappropriate in the light of the requirements specified in the call for applications. In such case, the organisation concerned shall be asked to appoint another representative.
5. Member organisations which are no longer capable of contributing effectively to the expert group's deliberations, who, in the opinion of DG MOVE, do not comply with the conditions set out in Article 339 of the Treaty on the Functioning of the European Union or which resign, shall no longer be invited to participate in any meetings of the group and may be replaced for the remainder of their term of office.

8. SELECTION PROCESS

1. The selection of the sub-group's Type C members shall be carried out via a public call for applications, to be published on the Register of Commission expert groups and other similar entities ('the Register of expert groups'). In addition, the call for applications may be published through other means, including on dedicated websites. The call for applications shall clearly outline the selection criteria, including the required expertise and the interests to be represented in relation to the work to be performed. The minimum deadline for applications shall be four weeks.
2. Registration in the Transparency Register is required in order for organisations to be appointed.

3. Organisations shall be appointed as Type C members by the the Director General of DG MOVE from applicants with competence in the areas referred to in point 4 and which have responded to the call for applications.
4. Type D and E members shall be appointed by the Director General of DG MOVE by direct invitation.
5. Members shall be appointed for unlimited time until the sub-group is decommissioned. They shall remain in office until replaced/until the end of their term of office.
6. In order to ensure continuity and the smooth functioning of the group, DG MOVE may establish a reserve list of suitable candidates that may be used to appoint replacements. DG MOVE shall ask applicants for their consent before including their names on the reserve list. The reserve list shall have a maximum validity of four years.

9. CHAIR

The sub-group shall be chaired by a representative of DG MOVE (hereinafter referred to as ‘the Chair’).

10. OPERATION

1. The sub-group shall act at the request of DG MOVE in compliance with the Commission’s horizontal rules on expert groups¹³.
2. Meetings of the sub-group shall, in principle, be held on Commission premises or in virtual form, as decided by the Chair.
3. DG MOVE shall provide secretarial services. Commission officials from other departments with an interest in the proceedings may attend meetings of the sub-group.
4. In agreement with DG MOVE, the sub-group may, by simple majority of its members, decide that deliberations shall be public.
5. Minutes on the discussion on each point on the agenda and on the opinions delivered by the group shall be meaningful and complete. Minutes shall be drafted by the secretariat under the responsibility of the Chair.
6. In principle, the sub-group shall adopt its opinions, recommendations or reports by consensus. In agreement with the Chair, the sub-group may adopt its opinions, recommendations or reports by voting. In the event of a vote, the outcome of the vote shall be decided by simple majority of the members. Members who have voted against or abstained shall have the right to have a document summarising the reasons for their position annexed to the opinions, recommendations or reports.

11. INVITED EXPERTS

DG MOVE may invite experts with specific expertise with respect to a subject matter on the agenda to take part in the work of the sub-groups on an *ad hoc* basis.

¹³ C(2016) 3301, Article 13.1.

12. OBSERVERS

1. Individuals, organisations and public entities other than Member States' authorities may be granted an observer status, in compliance with the horizontal rules, by direct invitation.
2. Organisations and public entities appointed as observers shall nominate their representatives.
3. Observers and their representatives may be permitted by the Chair to take part in discussions and provide expertise. However, they shall not have voting rights and shall not participate in the formulation of recommendations or advice of the sub-group.

13. RULES OF PROCEDURE

On a proposal by and in agreement with DG MOVE, the sub-group shall adopt its rules of procedure by simple majority of its members, on the basis of the standard rules of procedure for expert groups, in compliance with the horizontal rules and in line with the present terms of reference.

14. PROFESSIONAL SECRECY AND HANDLING OF CLASSIFIED INFORMATION

The members of the sub-group and their representatives, as well as invited experts and observers, are subject to the obligation of professional secrecy, which by virtue of the Treaties and the rules implementing them applies to all members of the institutions and their staff, as well as to the Commission's rules on security regarding the protection of Union classified information, laid down in Commission Decisions (EU, Euratom) 2015/443¹⁴ and 2015/444¹⁵. Should they fail to respect these obligations, the Commission may take all appropriate measures.

15. TRANSPARENCY

1. The sub-groups shall be registered in the Register of expert groups.
2. As concerns the sub-groups composition, the following data shall be published on the Register of expert groups:
 - (a) the name of Member States' authorities;
 - (b) the name of other public entities, including the name of third countries' authorities;
 - (c) the name of member organisations; the interest represented shall be disclosed;
 - (d) the name of observers.

¹⁴ Commission Decision (EU, Euratom) 2015/443 of 13 March 2015 on Security in the Commission (OJ L 72, 17.3.2015, p. 41).

¹⁵ Commission Decision (EU, Euratom) 2015/444 of 13 March 2015 on the security rules for protecting EU classified information (OJ L 72, 17.3.2015, p. 53).

3. All relevant documents, including the agendas, the minutes and the participants' submissions, shall be made available on the Register of expert groups or *via* a link from the Register to a dedicated website, where this information can be found. Access to dedicated websites shall not be submitted to user registration or any other restriction. In particular, DG MOVE shall publish the agenda and other relevant background documents in due time ahead of the meeting, followed by timely publication of minutes. Exceptions to publication shall only be foreseen where it is deemed that disclosure of a document would undermine the protection of a public or private interest as defined in Article 4 of Regulation (EC) N° 1049/2001¹⁶.

16. MEETING EXPENSES

1. Participants in the activities of the sub-groups shall not be remunerated for the services they offer.
2. Travel and subsistence expenses incurred by participants in the activities of the sub-group shall not be reimbursed by the Commission.

Done in Brussels, on 17 March 2021.

¹⁶ These exceptions are intended to protect public security, military affairs, international relations, financial, monetary or economic policy, privacy and integrity of the individual, commercial interests, court proceedings and legal advice, inspections/investigations/audits and the institution's decision-making process.