

Summary of discussions

smartEn E-mobility workshop "Making electric vehicles integral parts of the power system" 25 September 2019, 10.00-13.00

smartEn – Smart Energy Europe, the European business association for digital and decentralised energy solutions, invited business representatives to a workshop on the top EU priorities to drive e-mobility and its integration within the European power system.

After an introduction on current EU political and policy discussions on how to drive e-mobility, a smartEn's recent <u>White Paper</u> inspired the participatory exchange of opinions on challenges and opportunities that the EU regulatory framework should address during the EU legislature that has just started.

The workshop was framed around 2 pillars for the e-mobility success:

- electric vehicles (EVs) are treated as Decentralised Energy Resources;
- smart charging infrastructure is necessary to foster a win-win interaction with the grid which is beneficial for both EVs and grid.

The debate among business representatives can be summarised as follows:

- 1. Timing is crucial. The European Commission is well-positioned to propose an ambitious and harmonised framework across Europe to support e-mobility.
- 2. EVs will ultimately gain prominence as a grid resource, indistinguishable from other DERs. Because EVs can provide a wide range of grid services, EVs would be undervalued and under-utilised if restricted to a specific asset definition. The value of moving from an asset class to a service-based approach is recognized also in the e-mobility sector.
- 3. The service-based and technology-neutral approach applied to EVs and all DERs will enable aggregators to create mixed pools of different types of assets. Aggregators will have the ultimate responsibility of optimizing their portfolio, knowing the capabilities of the pooled assets, and provide services to both TSOs and DSOs, i.e. participation to balancing and local flexibility markets.
- 4. The capability of each EV to provide flexibility and be treated as real decentralised energy resources should be known at the moment of purchase.
- 5. While granular data behind the meter is not relevant for system operators, it should be available to EV drivers and EMSPs. A separate and specific metering system for EV charging in private buildings is redundant in smart and active buildings where energy assets communicate with each other through an intelligent energy management system.
- 6. A definition of "smart charging" is still missing. To fill the gap, the revised AFID should determine the communication and measurement capabilities of such smart assets.
- 7. Standards are necessary for setting minimum functionality levels across Europe while leaving enough flexibility to facilitate innovation. Interoperability has a key value and should be supported by standards.
- 8. EU support measures for charging infrastructure should facilitate the flexible interaction of EVs with the grid which happens when EVs are parked, normally at private sites (at home or at work). As public fast charging infrastructure cannot provide flexibility, smart charging infrastructure in multi-family and shared buildings should be specifically supported by EU funds and incentive schemes to share risk and overcome barriers for first movers. Such public support should cover also installation costs.
- 9. Grid data transparency on congested areas is key for accurate planning of charging infrastructure which does not constrain the electricity network, notably through the deployment of smart charging as a valuable alternative to network reinforcement. Local authorities should foster competition among market parties by launching KPI-driven public tenders for the deployment of public charging infrastructure, which should not be limited to fast/ultra-fast power capability, notably in urban areas for drivers without off-street parking.
- 10. The development of e-mobility is affected by the design of network tariffs, which should be cost-reflective by taking into account the counter-cyclical nature of smart charging in the connection studies of storage facilities.

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