AVERE
The European Association for Electromobility

The Stuttgart Declaration 2017 - the New, Clean Era of Mobility

The 30th edition of the international Electric Vehicle Symposium (EVS30) in Stuttgart gathers more than thousand leading global experts on all aspects of electric mobility.

The key messages of importance to the global policymakers gathering in Bonn this month for the COP23 summit, to other policymakers worldwide, and to everyone, is a *message of hope*, a qualified statement of *feasibility*, and a *call for action*.

The following have support in presentations to be held at EVS30 Stuttgart, 9.-11th Oct. and research published in the World Electric Vehicle Association Journal.

Reasons for hope!

The global warming forecast is terrifying, knowing the difficulty of the necessary changes in most sectors of the economy. Electrification brings hope because:

1. We have the potential to *over-achieve on the current ambition level* by further acceleration of the ramp-up of production of Electric Vehicles.

2. *Industry is on board*. It is no longer a question if electrification is the main solution for the future, it is only now a question of when, how fast it will be implemented.

3. Electric Vehicle drive trains have a *reduced energy need of 50-80%* compared to internal combustion engines, due mainly to the superior efficiency of the electric motor.

4. The fact that Electric Vehicles have batteries connected to the grid will enable *faster and deeper penetration of renewable energy* in power production, helping to solve the challenge of wind and solar energy production dependence on the weather.

5. Driving electric means driving green, but EV drivers also *think greener*. It is for example a fact that EV drivers are more likely to install solar panels at home.

Reasons to reason.

There will always be opposition to change, knowing the economic implications for owners of stranded assets due to disruption. However, here is the voice of reason from the leading experts:

1. Battery Electric Vehicles of all kinds are ready for full scale implementation to cover almost any need. Technology *development and breakthroughs will continue* and prices will drop. This will happen faster when we implement commercially faster. The technology is ready, but it continues to improve at an impressive pace. Cost reductions and weight reductions are accompanied by better performance and higher reliability.

2. *The full life cycle balance-sheet is already positive*, despite the fact that it is hard to make a clean product in a dirty economy. Greener power and larger scale reduces indirect emissions from EV production and use, and zero total emissions is feasible with low energy needs. Already the global CO2 emissions from an electric vehicle can be 13 times lower than a comparable internal combustion engine car (including the emissions for the production of the car, in the case renewable energy is used to produce the electricity for charging).

3. Climate measures often come at a cost or with unwanted side effects, while *electrification has mainly positive side effects*. Many life cycle analyses take global environmental impact into consideration. Material needs and mining, or other emissions harmful for the local environment are also included. The result is still very positive for EVs.

4. Charging stations are required and investment in charging infrastructure must be made. However, two *large parts of the investment will be carried by commercial/private actors*. One, the business case for commercial fast charging is being developed and will cover parts of the needed infrastructure. Two, in most homes where a car is affordable there is unused or relatively cheap electric power available most of the day and all night.

5. A very helpful fact is that most *EV buyers say they will never switch back to combustion engine cars*. It is a one way street. Based on research and consumer surveys EV buyers are much happier with their car than the average of car buyers. For example, in California and in Norway it is well documented how EV ownership spreads from neighbor to neighbor even when there are no marketing efforts.

Reasons to act.

The electrification disruption is coming. Policy will mainly contribute to determine the speed and the consequences, but politicians can also play an important role simply by setting expectations. Here are some considerations:

1. *More incentives mean faster implementation*, faster ramp-up of production, faster reduction in global CO2 emissions, and potentially less restrictions on other areas where we will struggle more to reduce emissions.

2. The consequences of lagging behind when disruption hits can be brutal for a country or a region. Gather objective knowledge, *predict the future by making it*, avoid the assumption that things can or will continue as before.

3. Very different policies have produced equally good results in the past. Key to success is to ensure steady EV sales and production increase in some way with *predictable policy that is adjusted gradually*.

4. We need a level playing field for *fair competition*. Zero tail-pipe emissions cannot be obtained by manipulating tests. Non-zero emitting cars need to have correct testing and correct level of taxes.

5. Research and Development is important, but need to be followed by sales at large scale. Scale and *sales also accelerates development* and is what changes the world in the end.

For the first time EVS – the Electric Vehicle Symposium will take place in Stuttgart, birthplace of the automobile, almost 130 years after its invention by Gottfried Daimler. Region Stuttgart is one of the world's leading automotive regions, which has developed into one of the global technology leaders despite global competition.

The question of sustainable transport is complex and includes multiple transport modes, technologies, and human behavior. We can expect that a lot will change with multimodality, digitalization and restrictions on polluting activities. The future belongs to those who recognize the opportunities brought forward by change. *Industrialization and large-scale production of electric vehicles and their ecosystems components and services begin now*.

About AVERE: AVERE – the European Association for Electromobility (avere.org) was founded in 1978 and is a European network of members including EV users, NGOs, associations, interest groups, public institutions, research and development entities, and vehicle and equipment manufacturers. AVERE activities include building information and data at European level for electromobility, hosting conferences, networking, and manifestations and advocacy to the EU Commission and other institutions to promote electromobility. AVERE has an electromobility vision for Europe with four pillars: a strong electromobility industry, clean, quiet and healthy cities, energy-efficient transport, and independence from fossil fuels.

About EVS: The international Electric Vehicle Symposium (EVS) started in 1969 and is known as the leading global conference on electromobility. It now gathers every year on either continent Europe, Asia, North America more than thousand experts from more than 50 nations for presentations of scientific papers and the latest developments within all aspects of electromobility, be it policy and incentives, drive train development, battery chemistry, life cycle assessment, market development, charging equipment, smart grids and autonomy.
EVS30 is organised by AVERE in collaboration with our partners in WEVA: EDTA and EVAAP. The full list of EVS30 organisers, partners and sponsors: www.messe-stuttgart.de/en/evs30/journalists/partner-links/