

# MANIFESTO

FOR E-MOBILITY  
AND RENEWABLE ENERGY



## FIRST SIGNATORIES



German Federal Association  
for eMobility

German Federal Association for eMobility

**bne**

Association of  
Energy Market Innovators

Association of Energy Market Innovators



German Federal Association for Solar Mobility



German Solar Association



German Wind Energy Association

The German Wind Energy Association



Deutsche Gesellschaft für Sonnenenergie e.V.  
International Solar Energy Society, German Section

Solar Energy Society, German Section

**IBESA** | BATTERY &  
ENERGY  
International Alliance | STORAGE

International Battery & Energy Storage Alliance IBESA

## PREAMBLE

The awareness of climate change has grown both among individuals and within companies. It is increasingly becoming part of our personal experience and some individuals are working hard to counteract its effects. That being said, there is still a lack of concerted political action. According to current scenarios, researchers no longer consider the goals of the Paris Agreement adopted in 2015 to be enough to avert severe damage. Having hesitated too long means that immediate action has become imperative: Germany is falling short of its 2020 goals; in order to lessen the extensive effects of global warming, quick and efficient action is required.

If transportation is to become completely free of CO<sub>2</sub> emissions, conventional technology will have to be replaced by alternative drive technologies in combination with alternative fuel. The technology needed in the transportation sector to offset the effects of climate change effectively and affordably is already available. Renewable energies and storage technologies have long been proven to be suitable for mass use, with costs having fallen dramatically in recent years. What the industry needs now are adequate, long-term reliable political parameters for the application of these technologies.

Only by reforming regulatory conditions and fueling the legislative fire in favor of e-mobility and sector coupling – the intelligent combining of the electricity, heat and mobility sectors – can the potential for climate protection in the transportation sector be exploited. Renewable energy sources and innovative system intelligence will play a key role in this.

With its Renewable Energy Sources Act (EEG), Germany created a template for many legislators around the world to expand the use of renewable sources of energy. In recent years, countries such as Norway and the Netherlands have set the trend in the transportation sector's energy transition. It is high time for Germany to join them in taking on a leading role in this energy transition and to effectively push forward e-mobility and concepts of intelligent transportation running on renewable energies as part of a European network.

The signatories are calling upon politicians in Germany and Europe to establish clear parameters for efficient sector coupling so that the expansion of e-mobility, charging infrastructure and renewable energies is advanced more rapidly and more comprehensively than ever before. Politicians, economists and the average citizen must act with equal vigor to promote the energy transition in all sectors and reach the set climate targets to pave the way for a livable future.

# PREAMBLE

## SEVEN PROPOSITIONS FOR AN EFFECTIVE TRANSPORTATION TRANSITION RELIANT ON E-MOBILITY AND RENEWABLE ENERGIES

# 1

### DETERMINED ACTION AGAINST CLIMATE CHANGE

Climate change is accelerating and human-induced global warming increases the probability of extreme weather conditions and threatens at the very least economies, if not the whole basis of life for future generations. That is why we have the political obligation to reach our climate targets. The energy transition can only be achieved by consistent action and extensive investments in renewable energies.

The EU member states have set binding targets for reducing the amount of CO<sub>2</sub> emitted from buildings, transportation and agriculture, and Germany is now set to invest in climate conservation to boost eco-friendly growth and innovation instead of spending billions on pollution permits and paying penalties for induced damage to the environment. A sustainable mobility culture can only be established via a comprehensive energy transition in the transportation sector.

Experience has shown that the development of power generation using renewable energy sources creates new markets, but only if investors find reliable conditions – providing them is the task of politicians.

# 2

### TRANSITIONING TO RENEWABLES-BASED IN THE TRANSPORTATION SECTOR

E-mobility can only have a positive effect on the climate if the required electricity is renewably sourced. It is thus imperative that the energy transition in the transportation sector goes hand in hand with the expansion of renewable energy use. It would not be acceptable for the additional demand for electrical energy resulting from the increase in electric vehicles on the road to be met by conventional energy sources such as coal, natural gas, crude oil or nuclear power; nor should the electricity and heat sector's growth be impeded as a result. If hydrogen is used in fuel cell vehicles as part of a decarbonized transportation system, it must be generated using wind and solar energy instead of natural gas.

## 3.

### INCORPORATING E-MOBILITY IN AN INTELLIGENT SYSTEM OF RENEWABLE ENERGIES

The effective use of e-mobility requires a smart, well-connected and flexible energy system. For this to work, suitable economic and legal parameters must be created. Legal, regulatory, bureaucratic and financial barriers to renewable energy expansion and storage as well as sector coupling and direct marketing must be eliminated and avoided.

The main goal remains supply security, and that means that electricity should ideally be consumed where it is generated. Concepts such as smart charging enable staggered, grid-stabilizing electric car charging, while bidirectional charging allows the car to both draw electricity from the grid and transfer it back, turning it into a mobile storage system. This is how electric cars and sector coupling contribute to energy security.

Charging processes should be managed in a way that is beneficial to the system and the charging infrastructure should be included in flexible markets so that the load transfer and storage potential from the mobility sector can be exploited via controlled and bidirectional charging.

## 4.

### DECENTRALIZED, CROSS-SECTOR ENERGY SUPPLY

Decentralization is a germinating seed of the future energy supply: In addition to Germany's national transmission grid, the power supply should be prioritized on a scale from small to large – from self-consumption to the needs of whole neighborhoods to the supply to all of Germany and Europe. The rule of thumb is: as much on-site consumption as possible and only as much transmission as necessary.

A crucial building block for the energy transition in the transportation sector is the installation of smart grids. The interplay of e-mobility and renewable energies depends on a comprehensive distribution of solar power systems, modern charging infrastructure and storage systems that are interconnected to form cellular structures with the help of modern energy management systems. This intelligent and decentralized exchange minimalizes the need for grid expansion.

A decentralized power generation and distribution system guarantees a high level of supply security and grid stability in the energy supply of the future. That is why we must work to expand smart grids, decentralize the generation of renewable energies for self- and direct supply, and institute intelligent storage options. We must start investing in the expansion of this intelligent and decentralized grid now to meet future requirements of a system with millions of "prosumers and flexumers" acting simultaneously as generators and consumers of power.

# 5

## CONSISTENTLY DEMANDING AND PROMOTING ENVIRONMENTALLY FRIENDLY MOBILITY

To establish public awareness of sector coupling and to consistently advance the energy transition, purchasing incentives must be put into place. In addition to financial stimulus such as tax relief and privileges (e.g. special parking for climate-neutral vehicles), a comprehensive infrastructure is critical. Private and commercial investment in electric vehicles and charging infrastructure should be incited equally. With the growing availability of affordable, clean transportation options, any harmful action should be curbed, particularly via internalization of external costs across the board.

The expansion of charging infrastructure does not just involve an extensive, well-balanced distribution both across urban and rural areas; it also involves thinking beyond national borders, ensuring unrestricted mobility. It is also important to establish universal standards in charging and payment processes.

More attractive package arrangements for using renewable energies and e-mobility are necessary to drive the energy transition forward. To ensure flexible, climate-neutral mobility across Europe, ideas must be exchanged in politics and industry on an international level.

# 6

## ASSUMING A LEADING ROLE SIMPLY THROUGH THE CLOSE COOPERATION OF POLITICS, INDUSTRY AND ECONOMY

The transportation transition is not only an environmental project, but also one involving jobs, prosperity, human health and Germany as a hub for industry.

Germany has made its goal to become a leading market and leading provider of e-mobility. Whether on a large or small scale, this will only work if politics, industry and individuals use a concerted approach. At the same time, the transportation transition can only be successful if political initiatives from different levels of government work together effectively, from the whole of Europe down to smaller municipalities.





# 7.

## THE TRANSPORTATION TRANSITION REQUIRES A TRANSITION IN BOTH ENERGY AND MOBILITY

Generally improving and restructuring transportation in an environmentally-friendly way will only become possible through a combination of actions: reducing the use of fossil fuels, switching over to new drive technologies, relying on renewable energies, installing necessary infrastructure, and introducing modern and attractive mobility options.

In order to achieve the desired carbon neutrality in the transportation sector, a focused mobility transition is needed in addition to the general energy transition. The goal is to reduce the transportation sector's end energy consumption without restricting mobility, e.g. by expanding public transportation, introducing concepts of economic sharing and placing an emphasis on traffic reduction in city planning.



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