



Global
Sustainable Electricity
Partnership

MEMBER COMPANIES



Paris Summit Statement

June 1, 2018 | Paris, France

THE GLOBAL SUSTAINABLE ELECTRICITY PARTNERSHIP STRONGLY BELIEVES THAT ELECTRIFICATION IS AN ABSOLUTELY VITAL PATHWAY TO DECARBONIZING ENERGY.

Electricity is the energy of tomorrow's world, with a unique set of qualities that make it indispensable to meeting the growing need for reliable, affordable and clean energy.

Electricity is efficient, with electrical technologies three to five times more efficient than fossil fuel ones. Electrification results in a significant reduction in overall energy consumption, which also reduces the cost of use and limits the impact of new types of consumption on infrastructure.

Electricity is flexible, with electrification providing more flexibility in demand management between sectors. The parallel development of electricity in end-uses is required as volumes of variable renewable energy increase, in order to facilitate their integration at the lowest possible cost. At the same time, the electrification of end-uses enhances overall energy security of supply, with a diversified mix for generation making the electricity system more resilient.

With those attributes, electrification is an essential tool for environmental and climate protection. With well-balanced policies, emissions from the power sector can be reduced while keeping costs in check. Low-carbon electricity can then easily replace fossil fuels in transport, buildings and industry. Technologies already exist for efficient and competitive electricity end-uses.

Moreover, electricity is at the heart of the two megatrends sweeping our societies: urbanization and digitalization. Clean, affordable and reliable electricity will be key for strong electrification toward a modern and safe future.

GSEP believes that regulators can shift gears by promoting the electrification of end-uses in all sectors, including its economic and environmental benefits. For example, in order to reach zero net carbon emissions in the second half of the century, the efficient and cost-effective electrification of end-uses must be enhanced at the same time as the power mix is decarbonized, in order to avoid lock-in effects and stranded investments from the overdevelopment of fossil-fuel infrastructures.

Electricity will become the world's leading energy source by 2050, according to most projections, with a share in final energy demand that should double, from 18% today to about 36% in 2050. This represents a major shift in the energy sector, and the ambition can be even higher. With electricity prices kept affordable, and bearing in mind the current decreases in electricity technology costs, higher electrification rates should be possible, reaching over 50% of final energy by 2050.

The GSEP members reaffirm that efficient electrification is at hand, thanks to available and mature technologies that are ready for mass deployment: action is called for now. One example is the electrification of light-duty vehicles, thanks to rapidly dropping battery costs, which account for more than half the energy demand of the transportation sector. In the building sector, heat pumps are an efficient and competitive solution for producing heat and cold, which represents more than half the energy demand of the building sector.

Over the longer term, R&D and demonstrations should add new technologies to the portfolio and allow for emissions reductions in sectors of activity where decarbonization is still expensive. For instance, with electric trucks for long distance freight, or with larger heat pumps delivering higher temperatures for collective heating in buildings or for industrial needs. The challenge is to facilitate the emergence of a market and to create the structure for a competitive industry for these products. For others, more R&D efforts are required to lower the cost of technologies that could potentially result in their electrification, either directly or indirectly, such as hydrogen produced with electricity via electrolysis.

Electric utilities are moving forward and evolving, as they must ensure a reliable and affordable electricity system while facing new challenges. The declining cost of digital together with the spread of communication devices are paving the way for personalized and more fine-tuned management of comfort in homes, cities and mobility. GSEP companies seek to provide new services to "prosumers" and managing flexibility as a new source of value for the electricity system.

The GSEP members are committed to continue placing electricity at the forefront of sustainable development. GSEP has identified five key enablers, amongst others, for effective policies regarding electrification:

- a. **Set clear and efficient sector-specific electrification goals in line with economy-wide policies targeted at energy efficiency and emissions reduction.** Public policies should make it possible to give sector actors sufficient visibility to develop their products/services and infrastructure. This requires identifying the potential for competitiveness (cost-effectiveness) in different sectors (buildings, transport, industry) and over different time horizons, based on the specific characteristics of countries and their climate and environmental targets.

- b. **Establish a level playing field for all energy carriers.** Efficient electrification requires fair competition between energy carriers. Key actions in this regard will be reducing or eliminating subsidies when appropriate, removing inappropriate charges on electricity bills (i.e. taxes or levies) and taking into account environmental externalities, such as a carbon value.
- c. **Update energy efficiency codes.** Efficiency standards for buildings should also allow for fair competition between energy solutions, while guaranteeing efficiency gains for consumers and a reduction in greenhouse gas emissions. To this end, standards for final energy rather than primary energy should be the norm.
- d. **Set up regulation and support for the development of infrastructure.** This is crucial for electric mobility charging infrastructure as well as for the digitalization of cities, homes and industries. Norms and standards guaranteeing the interoperability of charging systems and the development of vehicle-to-X technologies should facilitate consumer choices and promote flexibility. Effective standards on security and transmission protocols between IoT systems should address the privacy and cybersecurity concerns of citizens.
- e. **Expand R&D and demonstrations to accelerate technology development.** Existing electricity technologies can be leveraged to meet a very large share of countries' economic and environmental targets. Additional solutions must be developed for ambitious objectives (notably climate targets). To ensure that the electrification solutions of the future will be available on time and on budget, specific technology roadmaps must be drawn up. These roadmaps, drafted jointly by research labs and industry, should set cost targets for different timeframes and allow them to be monitored. This is a more cost-effective path than rolling out solutions still far from commercial deployment.

The Global Sustainable Electricity Partnership (GSEP) is turning sustainable ideas into sustainable actions. Together, the GSEP companies serve 1.2 billion customers, and generate and deliver about one-third of the electricity used in the world, over 65% of which is generated with no direct carbon emissions. The GSEP is a leading voice of the electricity sector and intends to continue its leadership role in global electrification through education and sharing of innovative technologies to serve policy and market needs around the world.