



PHOENIX CONTACT – Empowering the All Electric Society



Dear business partner,

The key to sustainable business success is keeping track of the world's true needs, and constantly offering the best possible solutions to meet them. This can only be achieved by adapting constantly to an ever-changing world.

However, the rate at which today's world changes makes it necessary for us to rethink. None of us should be content with just following the change, we need to shape it ourselves in the future.

But what does the world that we want to actively shape in the field of our expertise look like? It is a world full of challenges that also offer great opportunities. For people in general. But also for Phoenix Contact as a globally active technology company. And similarly for you and your company.

Together, we can give answers to the questions of our time.

At first glance, the two big issues of our societies today – the fight against climate change and the millions of people striving for prosperity and development – do seem to be contradictory. However, they can only be solved together.

The solution is a sustainable energy revolution with an energy system that is cross-sectoral and based on electricity generated from renewable sources. This is where the All Electric Society comes in as a basis for a CO₂-neutral future. In this society, there is enough energy available to achieve global growth and prosperity, and the ability to ensure the preservation of our environment at the same time. Implementing this vision will result in enormous investments and growth opportunities over the next two to three decades. This implementation is based on the intelligent coupling of all sectors participating in the energy cycle. The key to this is electrification, digitalization, and automation.

If technology is the key to the solution, then industry is one of those holding the key. Therefore, we at Phoenix Contact want to join you in taking new paths so that we can take meaningful advantage of these enormous opportunities for a sustainable and renewable development in energy, infrastructure, building, mobility, and industry sectors together. For sustainable, cost-effective development. For a future worth living.

The All Electric Society

The All Electric Society is a society whose whole energy cycle is based on electricity generated entirely from renewable sources. Sustainably generated electricity is virtually the “primary energy source”. However, the final energy used is not always electricity. Security of supply and a comprehensive coupling of the electricity, building, mobility, infrastructure, and industrial sectors will only become reality if electrical energy is also used as the basis for the production of synthetic fuels (e-fuels) through power-to-gas and power-to-liquid technologies.

In the vision of the All Electric Society, a complete and sustainable energy turnaround is already on the horizon. Electrical energy can be generated from natural regenerative sources almost indefinitely and at low marginal costs. E-fuels can solve storage and transport issues. And, in turn, this will enable the challenges of renewable energy volatility to be successfully overcome. Moreover, we can continue using existing technologies and infrastructures also for e-fuels.



Power-to-X – energy as needed

Thanks to the utilization of Power-to-X technologies, energy will not only be usable in the form of electricity within the All Electric Society. The basis for the energy mix of the future is hydrogen, which is produced from regenerative electrical energy and is either used directly as an energy storage form or an energy source (hydrogen economy) or processed into methane or liquid fuels by enriching it with CO₂ from the atmosphere (CO₂ circular economy).

Against this background, energy scenarios and energy supply will be based on the use of existing infrastructures and technologies (gas pipelines, gas storage facilities, combined heat and power generation, filling stations) and transport options (LNG tankers). Power-to-X technologies in the form described are CO₂-neutral. They have the potential to gradually replace fossil fuels completely in the future.

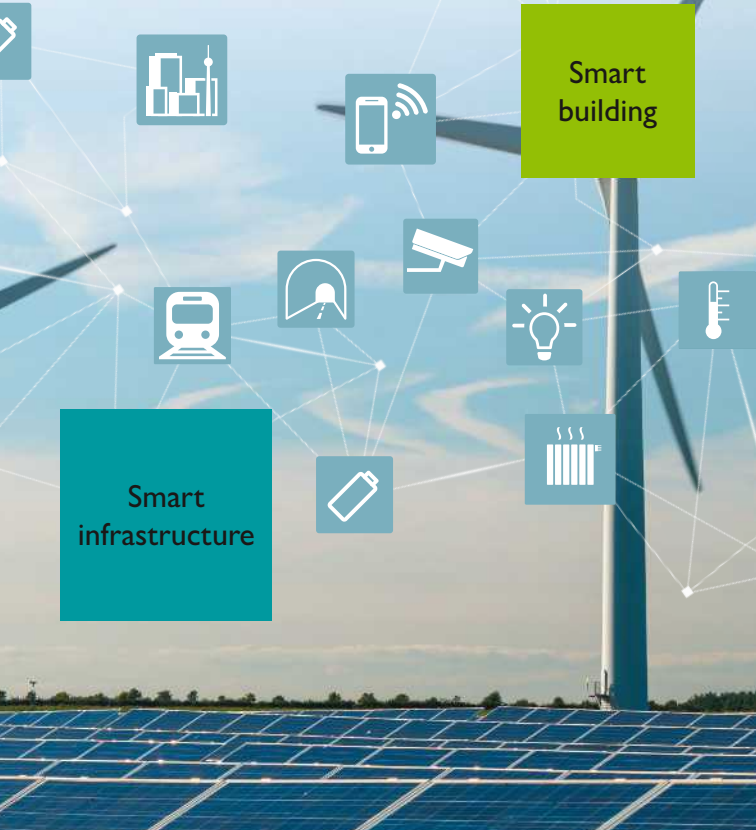


Sector coupling – the holistic approach

The key to the All Electric Society lies in the possibility of economic implementation. With Power-to-X technologies in particular, we do not yet have the scaling effects for cost reduction that have been experienced to a large extent with solar power technology, for example.

For an equivalent momentum to pick up, solutions must be as economical and cost-efficient as possible. This can be achieved by means of energy efficiency and by optimizing the energy- and data-related couplings and balancing all energy consumers, generators, and potential storage options in the best way possible.

This approach, known as sector coupling, requires the comprehensive electrification, digitalization, and automation of all areas, such as energy, infrastructure, buildings, mobility, and industry to create “smart sectors”. The integration of all areas provides the basis for the implementation of an All Electric Society. This “smart” sector coupling describes a field of applications in which Phoenix Contact has been active with its products and solutions for years.

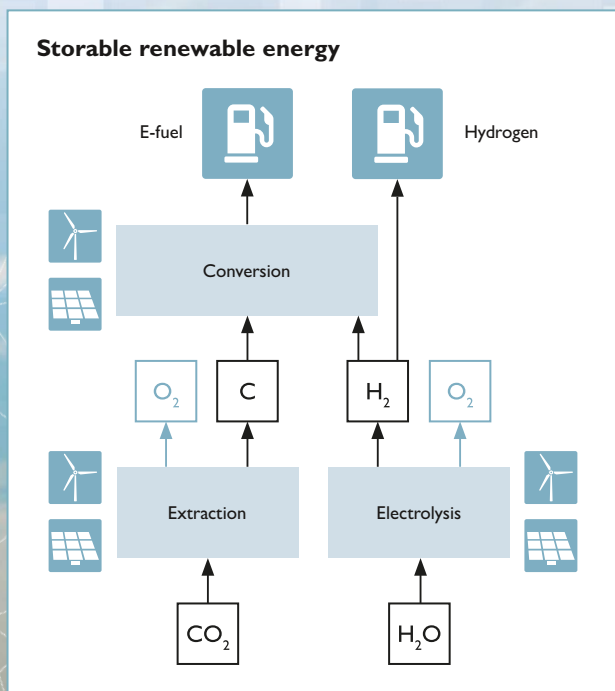


Sustainable energy for sustainable prosperity

When regenerative sources are used consistently, it will be possible to generate electricity at very low marginal costs in the future, thus making it commercially available to everyone. The use of Power-to-X technologies enables energy generators and consumers to be separated by large distances. Energy generation and the economic growth which is based on it can therefore take place in regions of the world that are still economically underdeveloped today.

Thanks to this fact, the All Electric Society enables not only a climate-neutral energy supply, but also an increase of agricultural and industrial production as the basis for economic growth for everyone.

The All Electric Society is a huge task and a great opportunity for companies all over the world!



The future concerns us all

The goals for a future worth living are in many ways clearly described and cannot be achieved by people on their own.

To be able to tackle this enormous task, we all need to bundle our strengths. We therefore invite you to join in the discourse and the development of the many opportunities relating to our contribution to the All Electric Society.

Let us join together in thinking about how we can bring our successful economic operations to a new dimension. We look forward to having discussions with you:

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