

The Grand Transition – Reacting to the Upheaval of the Energy Markets

Two years have now passed since we announced the radical realignment of E.ON to the energy markets of the future and the spinoff of the conventional power generation and other traditional system businesses into the Uniper Group. Based on our analysis, the businesses of conventional energy supply and those of the emerging energy future could no longer be managed ideally under one roof.



Michael Sen
Chief Financial Officer
E.ON SE

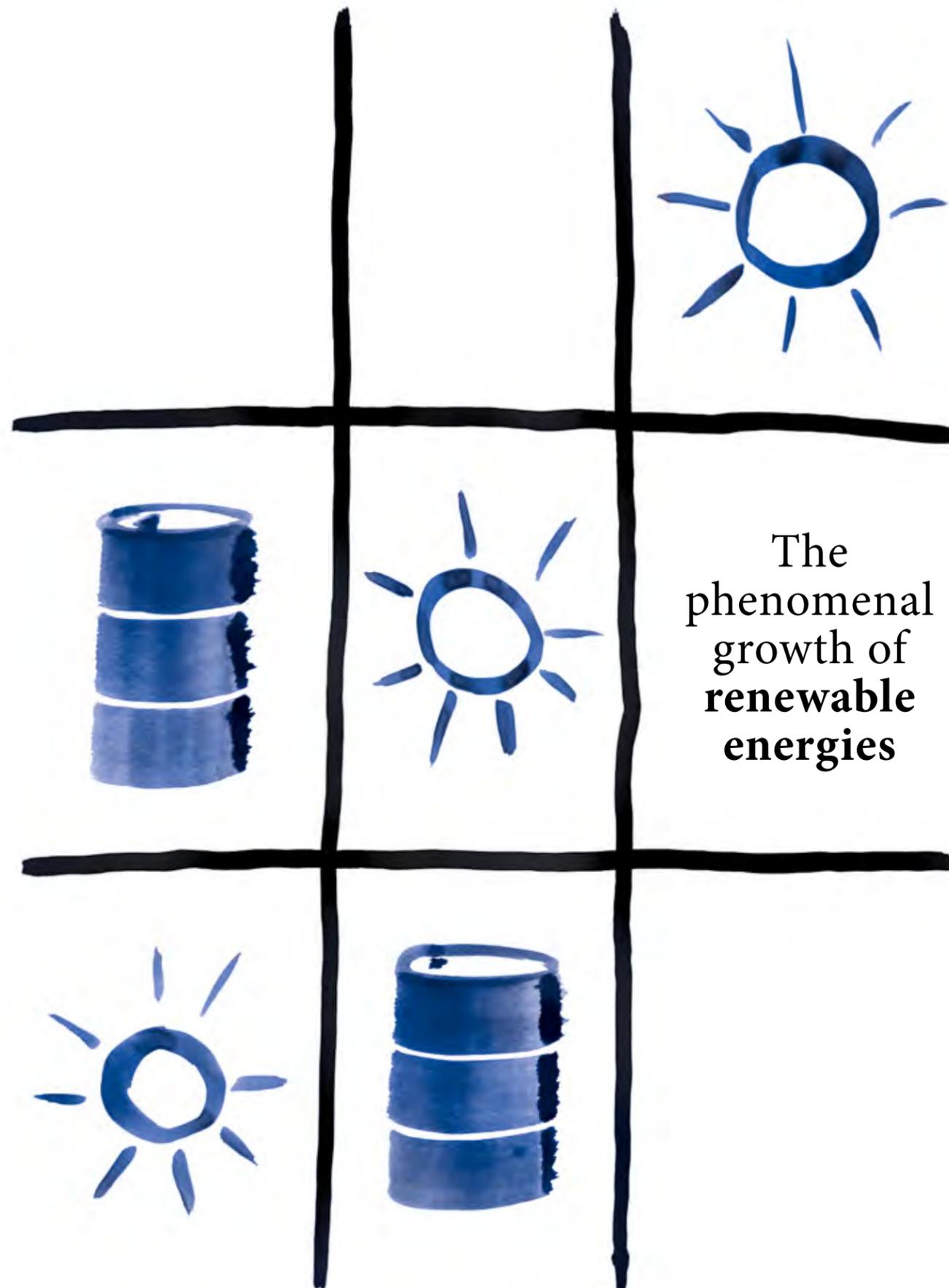
The
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Conventional and renewable, system business and customer proximity and central and decentralized no longer go together. That's why we created the new E.ON and the Uniper Group last year, two independent and inherently viable companies. In the two years since the announcement of our strategic realignment much has happened on the global energy markets. Is the logic behind our realignment still at all accurate? The answer is that it is even more accurate than ever. The Grand Transition, as the World Energy Congress dubbed the global transformation of energy structures, can no longer be stopped.

The future of energy will be renewable, decentralized and digital and not just in 30 years; indeed, this future has already arrived.

In recent decades, talk had become increasingly concerned with peak oil, meaning the point when the yield of

the oil sources is on a continuous decline. Today, the talk is of peak demand instead. Before oil can become scarce, the demand for oil will decline because more and more renewable energy is being deployed around the world and used with increased efficiency. The phenomenal growth of renewable energies, notably wind and solar energy, will continue. Today, wind and solar energy account for around four percent of the world's power generation. This share will increase by 2060 to anywhere from at least 20 percent to 39 percent. By 2020 alone, 700 gigawatts of renewable power generation capacity worldwide will reach the market for the first time, thereby accounting for two-thirds of all new capacities. At the same time, decentralized energy solutions are continuing to grow because more and more people not only want to design their energy supply according to their own notions, but they also have even better and cheaper technical options to do so.





This is a disruptive challenge for the energy industry whose conventional added value chains are falling apart. Energy is going from being a commodity to a customizable product, and the customers are taking over the reins.

In light of these changes, the worldwide demand for electricity is expected to double by 2060, because power is the modernization energy that makes greater energy efficiency possible, especially in industry. And power is the most important and often the only way to use energy from renewable sources. This is the only way the traffic and heat sectors, which account for more than 50 percent of CO₂ emissions in Germany, can considerably boost their climate protection efforts. The role of the world's leading energy form, which oil played for a long time, will be assumed in future by electricity.

Digitalization will enable a whole new quality when it comes to the individualization and networking of energy structures. Estimates reveal that come 2025 more than 25 billion “smart” applications will be connected to the electricity distribution network and the Internet. Today, digital networking is already making its way into private households including to the thermostats of individual radiators. Things are communicating with things here; the Internet of Things has already started in the energy industry. And along with it, entirely new optimizations will be made possible such as the control of radiators and other household devices in accordance with volatile price signals.

Time to focus – Three market segments

What is clearly emerging is that the global energy transformation is gaining more and more traction as a result of technological advancement and customer needs. This development continues to gather pace. No one can say for sure just where exactly the development will lead, but it is certain that three market segments will be the focus: intelligent networks, renewable energies and customer solutions. And these are exactly the market segments which the new E.ON is concentrating on:

- ▶ Our energy networks are becoming an intelligent platform that can manage the growing complexity of energy flows. We own around one million kilometers of electricity and gas networks that are in six European countries and in close proximity to customers. Already up to 80 percent of the power that flows through the German E.ON energy networks today comes from renewable facilities. Every third kilowatt of renewable capacity in Germany is linked to our network. Our engineers have made the networks more intelligent and more efficient for the customers and the energy transition, because the networks are the Internet of the energy transition.
- ▶ Our business with renewable energies delivers sustainable and, above all, climate-friendly energy. Since 2007, we have invested €10 billion in this. Today, we rank second in the world for offshore wind and among the top ten for onshore in Europe and North America. Last year, we produced 10.5 terawatt hours of green power. Mathematically speaking, that is enough to supply more than two and a half million households. In 2025, renewable energies will account for at least 80 percent of our own power generation.
- ▶ Our customer solution business develops customizable offers for various customer groups, from households to municipalities and right up to industrial companies. For many years, decentralized solutions based on combined heat and power production have been a strong business area at E.ON. Here in Germany we have been among the market leaders for years. And right now, more than 400,000 of our household customers use services beyond the delivery of power and gas. At the moment, we are experiencing how the market for energy-related customer solutions is becoming more and more differentiated and full of entrepreneurial spirit. And that will gain more momentum with digitalization. We have identified good opportunities for E.ON to join in successfully here. After all, we have more than 23 million power and gas customers in Europe.

Decision making revised

Key for the entrepreneurial success in the new energy world is a clear focus on the needs and requirements of our customers. Our structure was shaped for a long time by the conventional and predominantly centric structure of energy supply, however, the new energy world is mainly decentralized. For this reason, future decisions at E.ON will be made as locally and as close to the customer as possible. There will only be central decisions if they cannot be made more efficiently on site and close to the customer. As a first step in this direction we have rearranged our businesses into two areas. One area bundles the infrastructure and asset-based business, so, networks, renewable energies and nuclear energy; the other bundles customer solutions, distribution and IT. But that is merely the start of a comprehensive structural and corporate cultural renewal of E.ON.

The energy future has about just as much in common with traditional energy supply as an iPhone does with one of those old black Bakelite phones with a rotary dial. And just as in the telecommunications industry, the same applies to the energy sector: The future always comes faster than most people think. Those who want to survive have to be willing to radically question themselves. This was and remains the ambition of E.ON. ▶

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