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Blockchain is more than writing a smart contract

Being at the Event Horizon 2019 conference in Berlin last week, there is no doubt that blockchain will be part of our future energy systems. The technology has been proven in many different pilot implementations and there is a growing number of start-ups focusing on different parts of the value chain e.g. node management, security of information and efficient data handling. But still, to allow successful scaling of the new solutions, there are two essential elements missing.

First, the connectivity to the real world is key. To allow blockchain in energy systems to work, a physical or API connection is necessary to make the collection of data and issue of control mechanisms possible. With new assets like storage systems, solar inverters, e-mobility chargers etc. connectivity can be relatively easy. Often provided by the asset itself, this gives at least basic access. However, relying purely on these new assets creates dependency on their speed of growth. And not only for growth but also for inclusivity, retro-fitting has to be considered to allow the maximum potential customer base to profit from

new products and services. To allow scaling, the hardware has to match the electrical and physical requirements such as: 1-phase versus 3-phase set-ups, Modbus/ dry contact interfaces and the amount of capacity to be connected. Additionally, the blockchain set-up has requirements like computing power to run successfully and complying with regulatory requirements for different energy and grid services. For example, in Germany, local frequency measurement is necessary to provide fast frequency regulation for the energy grid. All these together have to play a role in the choice for hardware.

Second, even if technology is proven, only the creation of differentiated and sustainable business models will make scalability possible. These business models are different from what the industry has used traditionally. Flat-rate models, cloud solutions as well as local community set-ups are the first attempts to combine the common energy tariff model with new services and value propositions. The offerings often include the provision of assets like storage, solar or at least controlling hardware. Mass market customer

acquisition, installation and support are new areas to be handled. It all comes with the advantages of differential customer engagement but also the challenges of customer handling. The value creation is shifting from a single source, easy identifiable revenue and cost structure to a more complex set-up where different revenue sources like monetization of flexibility, fees for customer services etc. are combined. Creativity and the willingness to stack-up value streams is key to the creation of convincing value propositions.

This requires re-thinking of existing processes and structures, which definitely comes with some unfavorable decision to be made.

And last not but least courage is needed, to take up some uncertainty and risk to be part of the leading group of companies shaping the energy future.

At **tiko**, we believe that the energy revolution comes from the people, for the people, and that a better earth will only be possible if we collectively change the way we consume energy.

Our flexible and modular technology enables innovative solutions for prosumers to maximize their self-consumption, and thus their return on investment. Consumers gain insight and control over their energy consumption and increase their comfort. We put this unique knowledge at the disposal of our partners, making them leaders of the energy revolution, and helping them to gain an innovative image among their customers. **tiko is a company from the ENGIE Group.**