

Press release

Blockchain is not a disruptive technology for peer-to-peer power transactions in Germany

Cologne, July 27 2017. The hype around blockchain provided some rather discouraging scenarios for companies in the German electricity system. However, a new analysis recently conducted by the research institute ewi Energy Research & Scenarios (ewi ER&S) shows that blockchain currently has no disruptive potential for peer-to-peer power transactions. The study illustrates that platforms (e.g., based on blockchain technology) for peer-to-peer transactions do not face organizational or regulatory barriers. However, levies, taxes and surcharges on final consumer power consumption burden the disruptive potential of the technology and hamper deployment. Public blockchain-based platforms will come with additional costs for underlying distributed mechanisms.

As long as its application is limited to early adopters, peer-to-peer power trading does not interfere with the existing structure of the electricity supply system in Germany. Peer-to-peer transactions put the risk on non-fulfillment onto utility companies. Hence, utilities face higher costs. However, utilities could easily adjust contracts to mitigate this risk. Yet, the current system is not prepared to handle a large-scale deployment of peer-to-peer electricity trading. Large-scale deployment requires a new form of informational exchange. Means for the exchange of information between the grid operators and the parties of peer-to-peer trading still need to be established. Creating a system of certificate instead of power trading would remove this deployment constraint.

Although electric power is physically homogeneous, rising environmental awareness has led to an understanding of electric power as a differentiable and heterogeneous good (e.g., “green” or “local” electric power). Peer-to-peer trade makes incorporating such aspects in transactions possible. From an economic standpoint, it reveals the consumers’ willingness-to-pay for different characteristics of electric power. This information is valuable for public policy and might foster innovation. Energy policies, regulation and market organization should accept and adapt to the use of technologies and platforms to improve overall efficiency of the supply system and energy policy.

The study will be published on Friday, July 28th 2017.

For editorial questions and study requests:

ewi Energy Research & Scenarios gGmbH
Press office
Tel.: +49 (0)221 - 27729 108
E-Mail: presse@ewi.research-scenarios.de

About ewi Energy Research & Scenarios gGmbH:

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