



After the first half of the research project ETIBLOGG (Energy Trading via Blockchain-Technology in the Local Green Grid) the team presents the demonstrator at the European Utility Week trade show.

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Five companies and three research institutes cooperate on a blockchain-based solution to fully automate the real-time-trade of small quantities of energy. The aim is to implement a local and net-usable energy trade. Therefore, a blockchain device (BCD) has been developed to help establish an intelligent connection from the market to the physical reality. For this to work, every member in the market needs to connect via a BCD with the peer-to-peer-network. Current plant parameters such as photovoltaics or the charge of a battery can be processed to trade-relevant information via the BCD. Based on this information, participant-specific purchase or sales orders can then be placed on the local energy market. In addition, it is possible to use market data for plant control which can result in business benefits for the participants. At the same time, however, network-related flexibility potentials can also be achieved, which are becoming increasingly necessary, especially in the continuous expansion of renewable energies.

Building of the trading fair demonstrator

The ETIBLOGG demonstrator is a mobile model system acting as a micro grid consisting of local participants. Their producing and consuming behavior is simulated by three battery systems included in the trading fair demonstrator. The first battery represents a photovoltaic plant as a producer, the second one symbolizes a consumer, for example a bakery, and a third one acts as a classic prosumer with a home storage system. To perform the real-time energy trade via blockchain, fully automated trading agents come into action. These can be configured individually and represent every market member. The trade then takes place via a blockchain-based P2P-network. After the trading process has been completed, the BCD initiate a plant control and therefore the physical exchange of electricity between producer and consumer.

Presenting the demonstrator at the European Utility Week (EUW)

ETIBLOGG is part of the Smart Services World II booth ([L140](#)) at this year's European Utility Week in Paris. Visitors can observe the physical exchange and trade of small energy amounts via blockchain technology between the mock-up microgrid users live at the booth. The data exchange between electricity producers and consumers is displayed graphically on a screen. What's new is that the visitor can see the blockchain processes illustrated by a hands-on example set-up: If the photovoltaics unit produces electricity, it sends a respective sales order into the blockchain. A consumer – such as a bakery – can accept the order via the blockchain and cover its electricity needs. In a next step the electricity is delivered physically.

In the second project phase, ETIBLOGG plans to implement the lessons learned from this demonstrator setting to a real live application – a so-called real-life lab.

ETIBLOGG application areas

The technological findings from the ETIBLOGG project can be applied to trading electricity locally. This contributes to avoiding local bottlenecks in the electricity infrastructure and reduces the need to export and

import electricity from higher network levels. Additionally, ETIBLOGG enables the isolated operation of microgrids.

Depending on the exact set-up, the participants can for example be electricity producers (renewable or fossil based), consumers or third-party traders, offering surplus energy on spot markets and managing balancing groups of different market participants.

Project participants

ETIBLOGG consists of several companies and research institutions from all over Germany. Every single one of them is contributing their expertise to the ETIBLOGG project. Consortium leader is GETEC ENERGIE GmbH from Hanover. The other project partners are: Consider it GmbH, ESMT Berlin, Fraunhofer IISB, Mixed Mode GmbH, NXP Semiconductors Germany GmbH, PONTON GmbH and the University of Hamburg.

You are welcome to visit ETIBLOGG at the booth of Smart Services World II ([L140](#)) during the European Utility Week. You can also contact us before the trade show and make an appointment.

More information can be found here: <https://www.etiblogg.com>

For further questions, please contact:

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