

# Wholesale P2P trading

Europe's Enerchain project aims to enable large-scale peer-to-peer trading for wholesale natural gas and power – making it unique in its focus, size, and disruptive potential.



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More than 35 companies are taking part in the initiative, including most of Europe's biggest traders of gas and power, such as E.ON, Enel, Endesa, Iberdrola, RWE and Vattenfall.

The volumes these big beasts could bring to a new marketplace could disrupt the business model of the brokers and exchanges that facilitate wholesale power and gas trading today.

The project also embraces smaller, regional players – those grappling with a boom in distributed energy that want to trade without the fees, settlement risk, and clearing associated with the conventional market.

German technology company Ponton came up with the Enerchain idea in 2016, and demonstrated a first test trade on a prototype blockchain in November of that year.

It set up a small early mover group of companies to work on the idea and, by February 2018, it was able to carry out several live trades using the Enerchain software powered by open source

blockchain engine Tendermint. The trades involved Endesa and Gas Natural Fenosa, Energie AG and Stadtwerke Leipzig, and Verbund and Salzburg AG, and demonstrated proof of concept.

But, with no fixed launch date set for commercial trading, Enerchain's challenge to the existing order remains a vision for the future.

As of mid-2018, the companies involved still had to agree to governance, form a legal entity, and then actually start trading in earnest. The software itself is evolving and has limitations in transactional speed. Several participants are there to observe and learn, and it remains to be seen who among the big beasts are really serious.

Participants are believed to be setting up a registered not-for-profit cooperative, similar to a Genossenschaft in Germany or a Stiftung in the Netherlands. This entity could carry out commercial operations for the benefit of its members if those operations reduce barriers to entry and are in the public interest.

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*— Thorsten Kuehnle, E.ON's Vice President  
Future Lab Digital Transformation*

While some participants say their interest in Enerchain is more about understanding the potential for blockchain, not spearheading a revolution, others are genuinely keen to turn concept into reality.

“The potential of blockchain technology lies in disintermediation,” E.ON’s Thorsten Kuehnelt told S&P Global Platts. “This creates true disruption; everything else is incremental innovation or optimization. Enerchain is one of the very rare projects, outside the financial sector, which has real potential for disruption.”

### Speed restrictions

A key issue for participants is how fast the Enerchain software can add transaction data to the blockchain.

The products must “suit the software,” Ponton’s Rex Kempcke told S&P Global Platts. “This is a young technology, with a block-building time of one second [per block]. There are restrictions with regards to speed of transaction, and we need to build trust within organizations – they are not going to trade all their assets over new technology.”

The potential is there to boost block building time to more than 100 per second, and perhaps as high as 300, depending on how much computing power is available.

While 100 blocks a second is not fast enough for high frequency spot trading, it is enough for many, if not all, the forward and specialist load curve contracts that several Enerchain participants have in mind for the platform.

Enerchain is focused on testing and offering physical spot and forward power and gas products for any European delivery zone, including

standard and non-standard products. But there is scope to extend this to post-trade reconciliation services.

Once a deal is executed on Enerchain, it is pushed to the electro-technical information model systems of the company, from where it goes down the traditional reconciliation cycle.

“We’ve started at the front end because there is less integration with legacy systems,” said Kempcke. “Once the blockchain framework is in place, however, it can be extended along the trade cycle.”

The idea is for Enerchain to cover the entire cycle from pre-trade through reconciliation, with third-party platforms or services (such as screen vendors) linking to the blockchain infrastructure.

### Lower risk

One of the benefits of blockchain is reducing settlement risk, removing the need for clearing. The moment a transaction is executed, value is transferred using a digital currency or token. This makes it easier for smaller players to join a private blockchain, like Enerchain, because of lower collateral requirements.

“Fiat currencies, like the euro and the pound, are not digital yet – you can’t transfer euros or pounds via the blockchain, so you need a cryptocurrency token,” Kempcke said.

A trustee issues the token and holds the equivalent in a fiat currency in trust. The transfer and settlement are done by the token currency. In the longer term, fiat currencies themselves may have digital versions, although central banks are proceeding with understandable caution.