

Decentralized, *P2P* Energy Trading

i Introduction

In today's world every new technology get outdated in every other year. Predicting such technology shifts and adapting your business with them, is the key to survive in the technical world. One of the recent technologies, which is on everybody's mind is Blockchain.



Blockchain is a technology which has gained a lot of momentum in previous months. This case study showcases how an Energy Trading platform was successfully implemented on the block chain with creation of its own crypto currency and smart contracts.



Customer

The client is recognized as one of the leading energy trading companies in the European energy industry. The client trades in the Nordic countries, in Continental, Central Eastern and Southern Eastern Europe, the United Kingdom and with global commodities across the rest of the world.

The client manages the trading of physical and financial energy commodities, with the current mission of extending the reach of its operations to the general masses as well. For this, a solution (platform) is desired to facilitate trading directly without the requirement of any third party.



Requirement

There were thorough discussions on the existing and desired process that the client wanted to integrate on the platform. After the communication, Winjit's team identified the key requirements as-

- ▶ Need to map the current process using blockchain technology
- ▶ Need to develop client's own crypto currency
- ▶ Develop shared ledgers between the trading houses (parties)
- ▶ Ensure privacy and scalability



Challenges

The existing process comprised of two traders initiating a trade through online exchange by means of a broker, after consulting price intelligence through an index agency. Both the parties then entered the transaction details into their ETRM (IT) system. These details were then retrieved and exchanged between the parties and the broker in order to confirm and reconcile the trade.

The trade was settled physically through a transmission system operator and financially through a clearing house or bank.

This complex process, generated a number of pain points categorised as-

- ▶ High Transaction Costs
- ▶ High Operation Costs



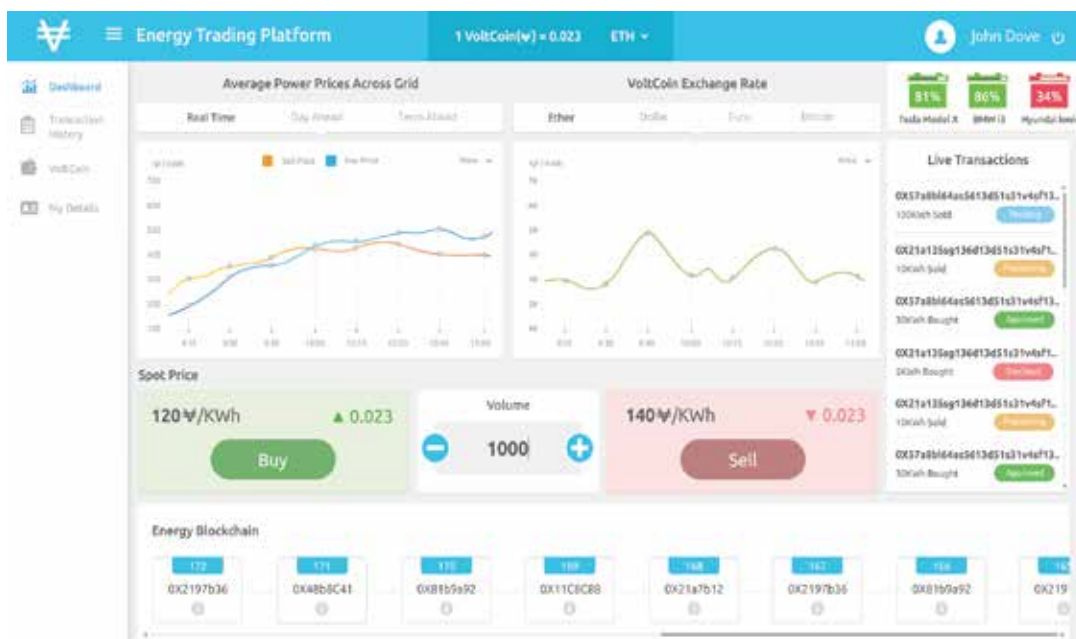
Solution

The desired platform was built by the Winjit's team using the blockchain technology. The solution comprised of developing client's own crypto-currency.

The solution could be accessed only using a login system where buyers, sellers and grid stations could generate the login credentials through registration.

The platform provided functionalities for easy trading of energy. All the trading was done in energy units through the client's own crypto currency, volt coin. Exchange rate of the volt coin was given in graphical form in terms of Ether, Dollar, Euro and Bitcoin, on the dashboard.

To eliminate the post-trade communications (verify and reconcile) between the trading parties, a shared ledger system was implemented. Instead of sending trade details via email, the back-office logged a trade into a blockchain, which the counterpart could verify in real-time. With this system, traders didn't store their data individually anymore, but shared in a secure medium in which information could be transparently actualized and validated.





Achievements & Benefits

- ▶ The entire system was decentralised, making it securer and difficult to hack
- ▶ All the third party commissions were eliminated, reducing the transaction and operations cost
- ▶ With own currency, the client got a provision for ICO, for raising funds
- ▶ The platform, connected the entire community of traders



Conclusion

Energy trading platform was successfully implemented using the Blockchain technology. The trading of energy was facilitated by the client's own crypto currency in a securer way and with the shared ledger, authenticity of the contracts were maintained at every level.

Winjit technology is India's leading provider of innovative engineering solutions. Since its inception in 2004, Winjit has built and expanded its expertise in latest trending technologies including Internet of Thing, Artificial Intelligence & Machine Learning, Fintech Solutions, Product engineering and Digital publishing. Winjit provides end-to-end solutions from conceptualization and optimization to providing real-time solutions by developing software systems for any business is these fortes. Over the past decade, Winjit has provided innovative technology and engineering solutions that has resulted in world-class recognition and long standing customers.



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