Blockchain Community Solar is a win-win! – Trading your excess solar power to your neighbours

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The NSW Solar Bonus Scheme is coming to a close at the end of the 2016 year.
Those households currently on the 60c or 20c subsidised feed-in tariff for their Rooftop Solar PV are looking at how they can maximise benefits from their small scale renewable energy systems after Scheme end.

Retail tariffs don't look too promising with most offerings below 9c/kWh feed-in-tariff for electricity sold back into the grid.

Blockchain technology provides an opportunity to change the way we sell our surplus energy. Blockchain is the software behind bitcoin transactions. Bitcoin transactions are secured by military grade cryptography and payments are irreversible and secure.[i] Bitcoin is a virtual currency and can be exchanged for cash or used to buy goods and services (such as paying your electricity bill).[ii]

Thanks to Bitcoin and Blockchain technology, peer-to-peer (P2P) trading of renewable energy such as solar PV is now possible. A community energy market using blockchain technology and smart contracts enables P2P trading for community members to trade energy, both securely, and automatically.[iii] Blockchain can be utilised to allow households with solar PV systems to sell their excess clean energy to their neighbour using the electricity grid.[iv]

Electricity is sold by the Solar PV owner at a price greater than their retail tariff and bought by their neighbour for less than what they would pay for electricity from their retailer. This is a win-win.

The purchase of clean energy through electricity retailers (such as GreenPower), reduces greenhouse emissions, helps Australia transition to renewable energy and is good for the environment. However, as a process it is not necessarily transparent, local, nor community-centric compared to a community energy market using blockchain technology. Community members produce their own renewable energy, and incentivise each other to purchase any excess, supporting a local energy marketplace.[v]

Power Ledger, a Perth-based start-up, has commenced trials of P2P energy trading using blockchain technology at various sites in Australia[vi] and New Zealand[vii] with commercial trials expected in 2017.

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[i] https://bitcoin.org/en/

[ii] https://bitcoinmagazine.com/articles/living-room-satoshi-launches-pay-anyone-bitcoin-payment-service-australian-bank-account-1434406666

[iii] https://news.bitcoin.com/bitcoin-blockchain-solar-energy-boom/

[iv] https://westernpower.com.au/community/blog/the-energy-market-s-silent-revolution/

[v] https://medium.com/@AshTayTweets/blockchain-community-solar-the-value-of-a-renewable-energy-reputation-b3fbcfcba4a3#.deowcbp14

[vi] http://reneweconomy.com.au/bitcoin-inspired-peer-to-peer-solar-trading-trial-kicks-off-in-perth-29362/

[vii] http://www.the-blockchain.com/2016/10/28/peer-peer-blockchchain-fuelled-energy-trading-trialled-new-zealand/