

KEPCO peer-to-peer energy trading results



Power Ledger

August 2019

KEY DETAILS

Duration: Five Months

Location: Kansai, Japan

Company: Kansai Electric Power Co (KEPCO)

PROJECT OVERVIEW

Power Ledger, in partnership with Japanese utility KEPCO, trialed a blockchain-enabled demonstration of P2P transaction for post feed in tariffs (FIT) surplus power in Osaka, proving the accuracy and consumer acceptance of Power Ledger's leading-edge technology in Japan in addition to Australia.

The trial showed how communities can be provided with cheaper energy systems to offset existing energy costs and allow energy-generating customers to monetize their renewable energy investments by selling their excess energy via Power Ledger's P2P platform.

MARKET OPPORTUNITY

Japan currently has 40GW of installed solar capacity, however a significant reduction in FIT for solar power is scheduled for October 2019.

Under the current business model, Japan solar PV owners receive a lucrative FIT for energy exported back to the grid of around ¥40/kWh.

As of October 2019, the first tranche of FIT customers who entered into this program run by Japan's Ministry of Economy, Trade and Industry (METI) in 2009 will become ineligible to receive the FIT and will be beholden to energy companies who will set the buying price for excess energy from rooftop PV systems less than 10kW.

More than 500,000 FIT customers will be affected by this change and this number will continue to escalate per year by approximately 200,000 additional customers.

The Japanese public has spent more than ¥10 trillion (\$92.8B) since the tariff's introduction in July 2012.

The Asia-Pacific has a \$27B solar market (without FIT to counter the high price of solar in Japan) this is predicted to drop to \$1.67B by 2022.

The Power Ledger platform enables solar owners to retain their faster payback options and help lessen the impact of the Japanese government's new policy by selling it onto someone else.

ABOUT THE TECHNOLOGY

Energy trading software company Power Ledger has completed a five-month trial with Kansai's second largest utility, KEPCO, successfully proving its system can offer customers a viable alternative to the FIT model.

During the trial, KEPCO shared meter data from eight participating meters that simulated prosumers and consumers at Tatsumi Research Lab in Osaka.

Power Ledger provided KEPCO access to its trading platform to facilitate and monitor energy trading between participants to increase the incentive for the development of renewable distributed energy resources (DER's).

Applied on a larger scale, Japan energy users could have saved more than ¥2 trillion (\$18.5B) in 2019 alone by using Power Ledger's platform.

RESULTS

Over 55 kWh of solar energy was traded per week, which, if measured on an annualised basis would equate to 2,860kWh.

Executed 3 different trading logic models in the two-phased trial: peer to peer default trading, dynamic pricing peer to peer and solar allocation trading.

In Phase 2, there were over 3,500 energy transactions each week.

About 20% of energy consumed by the participants was renewable.

WHAT THIS MEANS FOR POWR

Power Ledger's technology enables the creation of new markets for peer-to-peer energy trading. In these markets, units of electricity (kWh) are traded using pre-purchased tokens called Sparkz. These are issued against escrowed POWR tokens.

The more users onboarded onto Power Ledger's platform and the more partnerships Power Ledger enters into, the more the token economy will drive the demand for POWR. When our partners want to gain access to the suite of products Power Ledger developed, a license fee must be paid in the form of escrowed POWR tokens.

This mechanism means that as Power Ledger's technology gains market adoption, the greater the demand for POWR tokens, leaving less in circulation.

"Although there are still many challenges like amendments of relevant laws for commercialization, Power Ledger's product presents significant opportunities for prosumers to sell their excessive energy at more advantageous prices and for consumers to buy it at more affordable prices."

– Fumiaki Ishida, KEPCO representative general manager

"The success of the KEPCO trial is an extension of successful projects Power Ledger has deployed in other markets, leveraging the ongoing development of our technology as well as the experience of working with major energy players like KEPCO."

– David Martin, Power Ledger co-founder and director