Grid+

Ecosystem for distributed energy management

MESSARI

Grid+ is building a blockchain based trading platform for energy with the aim of providing electricity at lower prices to consumers.

Grid+ intents to act as a commercial energy retailer in deregulated markets by focusing on automated energy accounting and administration, and by decentralizing the purchase/sale of electricity via Ethereum smart contracts.

Project Overview

Name	Grid+
Issuer	Grid+ Inc.
Category	Utility Token
Sector	Energy
Sale Start	10/30/2017
Sale End	11/13/2017

Token Overview

Name	Grid+
Symbol	GRID
Type	ERC20 token
Initial Distribution	39,236,491
Current Supply	39,236,491
Max Supply	300,000,000
Emission Type	Fixed

Resource Links

- Website
- GitHub
- Twitter
- Medium
- Reddit
- Whitepaper

Project Background

Grid+ is attempting to build a combination of hardware and software technologies focused on providing more efficient electrical power to consumers. The project was founded as a spoke of ConsenSys and is focused on deregulated energy markets in the U.S. Deregulated energy markets allow for the generation, transmission, distribution, and retailing of electricity to be offered by separate entities. Grid+ plans to sell electricity as a retailer in these markets.

The team believes that through a combination of smart devices, blockchain based automatic payments, and peer-to-peer energy trading they can solve perceived issues with the current energy marketplace. This includes high fixed costs for retailers, unpaid bills (bad debts), and non-dynamic billing that ultimately increase the prices paid by consumers for electricity. In the future Grid+ network it is proposed that devices will be able to create dynamic markets where surplus energy can be sold to offset the cost of purchasing it at an individuals peak times.

Grid+ plans to initially purchase wholesale energy and sell it directly to consumers that have established Grid+ accounts. This can help reduce costs for consumers by creating a direct relationship between the company and users with payments made in real time through the Ethereum blockchain. Ultimately, the project aims to allow individuals to create, consume and trade their own energy through at home renewable energy sources, like solar panels, and battery storage. This goal assumes that consumers will have access to electricity at dynamic prices and that the data needed to compute real time consumption and distribution costs will be available through smart meters at each node in the grid. These data are expected to allow smart machines to make smart decisions about when to buy/sell electricity.

Technology

Grid+ is developing a hardware and software stack that work together to manage electricity loads and facilitate the buying and selling of electricity. At the core of the hardware stack is the Grid+ Smart Agent which is an internet-enabled gateway to the network. Each Smart Agent will run an Ethereum lite client in order to store tokens, manage energy usage, and process transactions related to buying or selling energy.

All new customers must complete a know-your-customer (KYC) process before using the network. Only Grid+ Inc. can register Smart Agent devices into a registry contract on Ethereum. After registration, a device serial number is mapped to an Ethereum address generated by Grid+ Inc and a small amount of Ether is loaded into the wallet address. Once the device is delivered to the customer and booted for the first time, the Smart Agent self-generates its own key to remove the control of Grid+ Inc. The Smart Agent device can be used as a hardware wallet, but other security measures include multi-signature (multi-sig), transaction verification, second factor authentication and segregation of key storage are planned for integration. The team plans to also create an API function that can interact with internet-of-things (IoT) devices in order to automatically manage power usage.

Payments will be made in a native currency called BOLT, with each BOLT redeemable for $1.00 worth of energy. Users will be required to fund their device with BOLT and provide an additional refundable deposit. Before a Smart Agent pays for energy, it must open a payment channel with Grid+ by depositing BOLT to a smart contract controlled by Grid+, a process that occurs automatically.

In order to simplify user experience BOLT tokens will be treated as credits that users add to their device through traditional payment rails. These tokens will be backed by a reserve account that holds dollars until BOLT is spent or redeemed. Fees are charged in BOLT and redemptions will be subject to minimum thresholds to cover transaction costs. Grid+ plans to generate revenue by investing these reserves during the time between the creation and redemption of BOLT tokens.

The Grid+ token (GRID) will allow users to purchase electricity from Grid+ Inc at wholesale prices. Each GRID token will be pegged to 500kwh of electricity at whatever the local wholesale electricity price (in fiat terms) may be at the time of purchase.

Once a token is redeemed it will be timestamped and removed from future circulation.

All fees will be routed to a smart contract called Karabaxos, enabling the public to audit the total fee pool earned by Grid+ Inc.

Distribution

Grid+ completed a token sale in Oct. 2017, raising a total of $32.2 million. Of the 300 million tokens created 12.1% (36.4 million GRID) was allocated to a pre-sale and 17.9% (53.6 million) was planned for a public sale. The pre-sale round ended on Oct. 5, 2017 after raising $29.0 million. Tokens were sold at a 31% discount to the final price of $1.15 and were subject to a vesting period where 25% is released every 6 months for 2 years starting on April 30, 2018.

The public sale ended on Nov. 13, 2017 after selling only 0.9% of total supply (2.8 million GRID). The remaining 16.9% (50.8 million) of tokens made available but not sold fell back under the control of Grid+, but were locked in a smart contract for a period of 2 years starting on Oct. 30, 2017. When this lock-up period ends, Grid+ will obtain these tokens and have the right to decide on next steps. Chinese investors were excluded from the token sale.

A total of 30% of tokens (90 million GRID) was allocated to the treasury with the intent to acquire new customers and "incentivize good behavior." Of these tokens 9 million are liquid and 81 million were locked for a one year period starting Oct. 30, 2017.

The remaining 40% (120 million) of tokens are ring fenced for founders, future employees and external owners of Grid+. These tokens are subject to the same vesting period as pre-sale tokens, 25% vesting every 6 months with the first release on April 30, 2018.

Team

- **Mark DAgostino**
CEO

- Background in Finance at Deloitte

- **Alex Miller**
CTO

- Software engineer at ConsenSys

- **Karl Kreder**
CSO

- Director of Energy at ConsenSys

- **Matt Walters**
VP of Engineering

- 10+ year software engineering experience

- **John Werner**
CEO of Grid+ Texas

- 10+ year experience in the energy sector

Advisors

Joseph Lubin
Co-founder & CEO at ConsenSys

Jeffrey Char
Director at TEPCO venture capital

Patrick Berarducci
Legal lead at ConsenSys

Igor Lilic
Co-founder and CEO at Cellarius

John Lilic
Energy markets lead at ConsenSys

Mike Goldin
Technical lead at ConsenSys AdTech

Matt Corva
General counsel at ConsenSys

AdditionalResources

- [YouTube: Grid+ Demonstration](#)

- [YouTube: Interview with Technical Leads](#)