Blockchain-based green energy trading platform

Energy Share（EGS）Whitepaper

Contents

1. Abstract

EGS (Energy Share) is an energy ecosystem composed of a series of new energy sources including photovoltaic, water, electricity and wind, as well as a series of decentralized energy applications including renewable energy such as battery repair. Its purpose is to create a world-class GESC community (Green Energy Share Community) adapted to the development of modern society. At its core is a decentralized system of green energy metering, registration, management, transaction and settlement based on EGS networks and local microgrids.

EGS is a new energy autonomous production and consumption scenario. EGS pays close attention to green energy in the network by connecting energy producers of different sizes and users of different types in microgrids independently or within the public chain. It will greatly improve the energy efficiency and reliability, and can go to the center of free trade, to maximize the cost savings of energy users. EGS will serve as an important link in bridging the physical, information and value layers of the smart grid in the future, enabling truly decentralized, autonomous and managed energy networks.

2. Backdrop

Energy is the driving force of social development and plays a crucial role in achieving the goal of sustainable development. However, energy consumption can also cause environmental degradation. Therefore, access to reliable and affordable energy services is of great importance to eradicating poverty and promoting social and economic development. Until today, there are still 1.6 billion people in the world without electricity, 2.4 billion people rely on traditional bio-energy cooking and heating.

Facing the energy crisis, the financial crisis and the fact that people more understanding of the climate crisis, new energy is developing unconventionally all over the world, the investment of all countries in new energy has risen sharply, and the production of new energy has rapidly expanded. Renewable energy power generation is the core of new energy development. The tight supply and demand of resources around the world and the global restrictions on greenhouse gas emissions in response to climate change have paved the way for new energy development. The development of new energy technologies and market expansion beyond imagination, many renewable energy resources will gradually become commercial projects. It is foreseeable that a gradual replacement between forms of energy will change the world economic and political landscape as well as human existence and lifestyles, and the energy revolution in the world is quietly taking place.

At the same time, the energy Internet, carbon trading, the rise of electric vehicles + smart transportation, the development of decentralized new energy + smart grid for energy storage and so on have been pushed by the multi-policy catches of environmental protection, enterprise reform and price reform To the cusp, the more attracted the attention of the international community and capital. Among the many key technologies in the energy Internet, energy storage remains the essence of the energy Internet, and the energy storage

system will also become a key node in the energy Internet industry. The major changes in the energy Internet and the decentralization of the blockchain, open source sharing and wisdom management has a natural fit In the private chain of photovoltaic power plants.

For example, the beginning of the operation of the power station business blockchain configuration, to achieve internal Across geographically authorized access, in the 2.0 era, power plant management thinking based on big data greatly reduced the operation and maintenance platform of a single electricity price operator. 3.0 era to achieve zero marginal cost of power generation, each component own ID and economic accounts, sales revenue automatically offset OPEX.

In the industry chain, the sale of electricity sales data analysis, the confirmation and registration. The second sale of electricity transactions automatically settled, and the third is point-to-point power generation cooperatives.

In terms of the public chain, 1.0 is information on emission reduction and emissions, and electronic data are fully established to ensure that data can not be tampered with and the regulatory costs are reduced. Ease of the Era 2.0 CCER Circulation, Blockchain Ease and Automation CCER Send and Circulate system. 3.0 is the Emission Reduction Economic Zone, the Emissions Reductions Thoroughly Specific Economic Ecosphere.

The value of intermediaries and storage units to decentralized PV for example, the future electricity market led to price fluctuations obvious, power station financial product development costs are high, how to do? Blockchain technology, first, the distributed general ledger data mandatory trust, the parties point to point interaction, the wisdom of the contract automatically execute automatic spot trading power fluctuations. Thirdly, the blockchain realizes the direct securitization of the power plant revenue to realize the crowdfunding of the power station based on the equity platform.

For the blockchain application of electric vehicles, the pain point is that private charging piles are difficult to be shared, the electric vehicle V2G lacks incentive mechanism, and the power battery cascade can not guarantee the quality of batteries. How to do? Blockchain offers its own solutions to real-world future by charging lean on smart contracts and distributed ledgers for on-time charging, V2G auto-response of electric vehicles, virtual currency incentivization mechanism, blockchain storage and certification of battery cell lifecycle information Power batteries can be transferred to storage plants in real value, to backup storage plants or to community storage plants, all of which are a combination of blockchain and renewable energy sectors.

In a word, the blockchain really realizes the digitized and precise management of energy. In the future, it can digitally map every degree of electricity. Through digital mapping, the power network can be re-modeled to achieve accurate management and settlement, forming a new production-life relationship. Based on the blockchain program, it will be found that the PV decentralized power generation trading model will become very simple. Peer-to-peer direct energy transaction, point-to-point direct transaction, low cost of the process, low transaction costs.

The electric power industry is undergoing profound changes as we move from a centralized generation system to a decentralized, smaller-scale production model. If such a trend continues, every household will have a power-generating facility(ie. PV or CHP) installed in the near future. Those facilities will generate enough electricity to meet

household demands and supply local communities with the surplus. Energy trading may thus be prompted with such a capacity enjoyed by a large number of households. Imagine a future where every household has installed PV and enjoyed a power surplus which can be supplied to other users. When electricity is traded within the local community, costs of distributing power, building transmission lines, and expanding generation capacity will be significantly decreased.

What's more, such a future would fundamentally transform the renewable energy landscape, where resources and capacities are unevenly distributed. Power surplus will be consumed within the local community first, while being complementary to the original power source.

The renewable energy sector relies heavily on subsidies from pro-clean-energy governments, but these subsides are dwindling, with Germany already pulling out its subsidy. Prosumers' profits are slashed. They sell at low prices to utility companies, which in turn sell to customers at a marked up price, reaping most of the profits. Against such a backdrop, a new solution, independent of subsidies and guided by rules of the free market, is much needed. An electricity market, where free trading happens, benefits all stake holders. Such a market is a double-edged sword in itself though, challenging and presenting new opportunities to traditional power grids, businesses and operations. Our vision for a future where solar and wind power production and electric vehicles consumption are the norm, is to find better solutions to manage a massive decentralized future energy grid which can in times be unreliable. Such a vision allows participants to maximize the use of electricity generated locally and delivers evident benefits: cutting power distribution cost and energy loss; managing local power grid better; eventually leading to decentralized autonomous energy communities that sit at the hearts of future smart grids and smart cities. This future also demonstrates how the development of market economy and civic society can go hand in hand. When citizens take the initiative to promote renewable energy and display innovation in the process, the nation succeeds in its supply-end reform in the energy sector and develops renewable energy equipment and storage.

Through the EGS network, or GESC community, such a vision comes to life. The network encompasses interconnected small-scale grids, which operate in a larger region. Advanced information technologies, combined with new energy technology, such as blockchain, IOT, AI, electric vehicles, energy storage technologies, micro grids, integrate real-time flow of power, information and value transfer among producers and consumers in a complex decentralized system where energy is traded and information is managed.

3. Abstract

-Vision

The distribution of electricity (such as solar panels and wind energy), consumption (such as electric vehicles, etc.) and recycling (such as battery repair) is very large. Our vision is to manage the extremely unstable and huge future Decentralized energy network to find a better way out. Following this line of thinking, participants are able to maximize the use of the local environment and the electricity produced locally. Not only can transportation costs and energy losses be avoided, but better planning of local grid management.

The application of EGS to a truly decentralized autonomous energy community for smart cities and smart grids in the future are a market economy within the energy industry The effective combination with the autonomous economy of citizens has stimulated people's initiative and innovation to participate in the development of renewable energy. This not only helps to promote the reform of energy structure and supply in various countries, but also helps renewable energy equipment and energy storage.

-Energy Internet

The concept of Internet of Energy was first articulated in 2011 by American scholar Jeremy Rifkin in his book The Third Industrial Revolution. Reekin believes that with the gradual depletion of fossil fuels and the environmental pollution caused by them, the industrial model based on the large-scale utilization of fossil fuels laid in the Second Industrial Revolution is coming to an end. Reeve King predicted that with a deep integration of new energy technologies and information technologies, a new system of energy utilization was forthcoming. He named the new energy system he conceived as the Energy Internet.

The content of energy Internet advocated by Rifkin is generally a little bit: from fossil energy to renewable energy; from centralized production capacity to decentralized production capacity; from closed to open this view has emerged, businesses, scholars and other people from all walks of life began Of the research, and invest a lot of resources in its research and development, energy Internet has therefore become the focus of discussions this year.

-EGS (Energy Share)

EGS (Energy Share) is an energy ecosystem consisting of a series of decentralized

energy applications that include new energy sources such as photovoltaic, hydropower and wind, as well as renewable energy including battery repair. Its purpose is to create a world-class GESC community (Green Energy Share Community) adapted to the development of modern society. At its heart is a decentralized system for measuring, registering and managing transactions and settlements based on EGS networks and local microgrids.

-GESC (Renewable Energy Community)

GESC, the abbreviation for Green Energy Share Community.

-Why EGS Energy

Sharing EGS Blockchain is a development platform dedicated to creating an Internet-based value transfer protocol and decentralized application designed to build a bridge between Bitcoin Ecology and Ethereum Ecology and to build a bridge between the blockchain world and the real world.

Unlike other smart contract platform, the existing wisdom contract platform is mainly based on workload proof (POW). Consensus mechanisms for workload proofing (POW) are difficult to deploy to large-scale scenarios due to resource and hardware constraints. At the same time, the consensus mechanism itself lacks flexibility. Because of the different participants, the requirements of the consensus mechanism are different in the public chain and the coalition chain (industry chain). EGS system includes EGS public chain and affiliate chain, because of the different network environment and participants, taking into account the decentralization of the public chain, participation in the threshold, security and reliability, the use of POS-based network IPOs. Because most participants in a federated chain are restricted nodes, the known counterparty considers the consensus mechanism differently from the public chain network. Therefore, the consensus mechanism provided by the EGS federation chain based on the convergence of the Proof of Time and the Raft protocol can Meet the Trusted Network blockchain speed and capacity requirements.

At the same time, the current blockchain system has a lot of closure. At present, the trigger conditions of most smart contracts come from the blockchain system itself, with few external triggers and lack of interaction with the real world. By using Oracle and Data Feed in the EGS system, real-world data can be used as contract trigger conditions to break the closed contract of smart contracts.

EGS is an alliance chain formed by a large number of distributed energy storage devices in the future. EGS Energy Alliance chain, to better ensure the safety and stability of the entire GESC ecosystem, partially decentralized, and has a very high performance to handle the communication between energy information flow and value flow. At the same time to promote EGS better committed to the development of GESC, focus on business landing, the implementation of blockchain in the field of energy implementation.

4. Token

4.1 EGS energy asset-WATT

WATT is a blockchain-based digital asset. Itsvalue is backed by energy:each WATT token represents 1KWh of actual energy stored in microgrids or distributed energy storage equipment. Energy Share（EGS） system monitors real-time energy consumption through smart meters, generates WATT tokens through smart contracts and issues them to users with privately owned clean energy generators.

With real-time energy consumption monitoring,by either smart meters or charging stations compatible with Energy Share（EGS）, the system can also generate private key signature script and transfer WATT token to the designated burning address.

4.2 EGS ecosystem asset–EEA

EEA（EGS Ecological Asset）represents its owner's access to power in distributed energy storage equipment.Future prosumers and electricity users must own EEA in order to

store electricity in energy storage equipment.

To guarantee the efficient and fair use of public resources, a commission fee on the user-stored energy in the distributed energy storage equipment is charged every 15 minutes.

80% of the proceeds go to the storage equipment owners. That means energy suppliers'proceeds correspond to the percentage of stored energy he contributes to the grid.

10% goes to the purpose of educating the market and new users, for instance,EEAs of small denomination are given for free to first-time users to facilitate their experience.

Another 10% goes to EGS network.

5. Tokens issue rules

-EEA Tokens

EEA is short for the EGs platform released tokens, issued a total of 700 million, and promised never issued. EEA is a decentralized digital asset based on Ethereum's ERC-20 offering. The EGS system issues 700,000,000 EEA tokens, a constant quantity of EEA tokens that will never be issued.

-Method of distribution

This ratio of 30% of the public offering of public offering, 35% of the company holds, 20% foundations, 10% founding team members early holding 590 company contribution award.

Distribution mode

Proportion	Quantity	Mode
30%	210 million	Open issue
35%	245 million	Company holdings
20%	140 million	Foundation
10%	70 million	Possession of the founding team
5%	35 million	Contribution reward

-Distribution plan

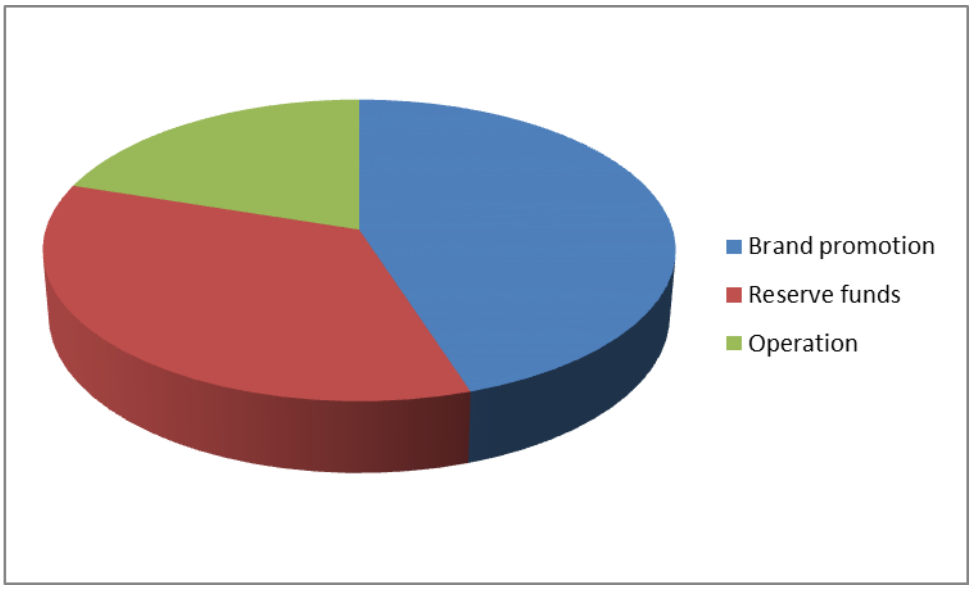
Distribution plan

Date	Work
2018.1.1	Determine the startup of the energy sharing (EGS) project, the design of the hand platform and the development of the currency
2018.01.20	Complete the preliminary draft of the white paper and consult with the investors in the industry to improve the white paper
2018.02.01	Announcing the EGS issue and issuing a white paper to the leading investors

2018.02.05	EEA tokens are launched, and multiple platforms are released at the same time
2018.02.10	Energy sharing (EGS) launched on public test
2018.03.10	The end of the energy sharing (EGS) issue (the end of the forecast is sold out)

This energy share-based public offering will be held on February 1, 2018, the tokens issued the first order first served mode and the price gradually increased until the 210 million EEA was sold out while stocks last.

6. Funding Plan



-Funding plan

(1) 35% of the funds raised through public offering will be used for operation and maintenance, the promotion of GESC communities, and the production and sales of equipment. Include team member contributions to provide rewards. And technical research and development funding. Until the electricity retail establishment was established in the selected non-regulated market, EGS considered it necessary to have enough Methanol. The first batch of construction of retail outlets in the market mainly in South Korea. This is based on the principle of project proximity and the combination of various factors, but the most influential factors are the penetration of smart meters, the regulatory compliance and the relatively high electricity prices mean that energy sharing (EGS) in the region The more competitive. After starting (and gaining a firm foothold) in Korea, Energy Sharing (EGS) will seek to grow its business in other strategic regions around the world. For now, the most suitable regions are Australia, Germany and the United Kingdom, but there are many other possibilities.

Creating a retail outlet requires large amounts of cash, and EGS cash is held by a third party. In many areas, it takes more than $ 1 million to build a network. It needs to be reiterated that these funds have not been spent. "Instead, they are stored.

(2) 45% of funds are used for brand building and promotion of energy sharing (EGS) Including for other traditional industries, the blockchain industry continues to promote and popularize knowledge, provide financial support for various types of market activities, and ensure that Energy Sharing (EGS) gains rapid market acceptance and rapidly accumulates trading users.

In the short term, energy sharing EGS) plans to spend a significant amount of money on marketing to get the first user groups in. EGS ads will focus on targeted areas and target populations, and as the brand name gains momentum, EGS) Will no longer rely on marketing / advertising, but to prove their strength at low prices.

(3) 20% savings funds for energy sharing (EGS), and response to various emergencies.

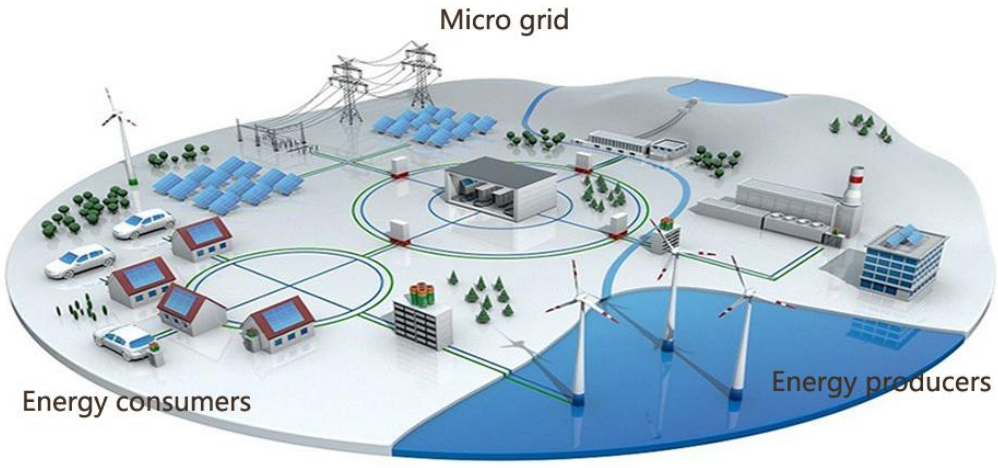
-Funding security issue

All funds obtained from public sale of funds security issues will be deposited into multiple wallets. The wallet of the multi-signature wallet will be subject to approval by multiple persons and managers who hold any funds. Vendor professional quarterly review.

7. Decentralized Energy Exchanges

7.1 Micro grid

Before peer-to-peer energy trading becomes a reality, we need to do a small operation on current electric power system and introduce into it a new grid structure. That's how micro grid comes to the picture. Micro grid is a highly autonomous and flexible energy network, able to either work in parallel with national grid or in isolation. It also integrates the distributed energy generated in a given community, significantly promotes energy utilization and offers excellent reliability.



At its core is an energy storage system, which, through voltage and band management, achieves stable and quality power supply, renewable energy generation and management. The storage system facilitates peer-to-peer energy transfer (i.e. consumers can purchase stored energy contributed by prosumers).Combining IOT facilities that meet measurement requirements and technology standards of multiple countries for measurement and

communication, the system has what it takes to bring about a decentralized autonomous energy community.

EGS is designed to facilitate renewable energy consumption, maximizing the trading of produced and stored energy and utilization of energy storage system. Therefore, unlike traditional micro grids, it prioritizes the use of renewable energy in the local community, with traditional grids playing a complementary role supplying the whole region with its backup energy storage.

7.2 Trading Platform

The foundation stone of any decentralized energy system is the capability of the different peers within the network to freely exchange the energy they produce and consume. This process of settlement is traditionally defined as a trading. There are different kinds of trading mechanisms being used worldwide for different kind of business, products and services. One of the key points of a trading mechanism is the pricing mechanism.

A pricing mechanism defines the principles and processes for which products and services prices are negotiated between the price asked buyers (commonly referenced as "ask" price) and the price bided by sellers (commonly referenced as "bid" price). Three of the most common ones are: auction, reverse auction and stock-markets mechanisms.

The auction pricing mechanism is commonly used by online platforms such as eBay and offline for art selling. Sellers setup a minimum price for which they are willing to sell their product or service and buyers try to outbid each other to win the auction. The buyer willing to pay the highest price for the auctioned item within the auctioning time will proceed to acquire the item and pay the bidding price to the seller. If no bids are made no transactions will be made. Auctions are a great mechanism to maximize the price a seller can obtain for a specific product or service and is good for products or services with many buyers but few sellers.

The reverse-auction pricing mechanism is commonly used by governments and companies to outsource services. In a reverse-auction, the buyer defines a maximum bidding price and defines the product or
service it requires. Sellers interested to win the contract will offer their product or service at a given ask price. Once all interested sellers provide their asking prices, the contract will be rewarded to the seller with the minimum asking price that fulfills the contract requirements. This is a great mechanism to minimize the price a buyer is expected to pay and is good for products or services with many sellers but few buyers.

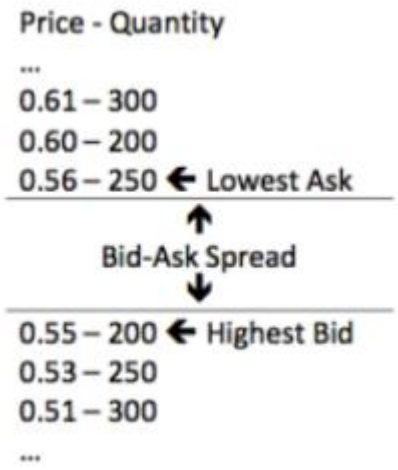
The Stock Market pricing mechanism is commonly used by world-wide stock markets and currency exchanges and other kinds of commodities. Sellers and Buyers are expected to freely publish the amount they are willing to sell at which asking price meanwhile buyers are expected to freely publish the amount they are willing to buy at which bidding price. Following a first in first served policy, buyers with bids higher than the minimum asking price will be able to acquire the commodity from sellers. This pricing mechanism doesn't maximize neither minimize the deal price but it is a very good mechanism for markets with many sellers and many buyers.

For a peer to peer energy trading platform we expect many buyers and many sellers'

environment, this means that from pricing mechanism point of view the most suitable pricing mechanism is likely to follow the example setup by the Stock Market, but with some specific modifications to align with our specific needs.

7.3 EGS Pricing

Going into more detail on our selected pricing mechanism, a typical step for Stock Markets is to create the order book table.



Order Book Example

Every order represents an acceptable price for each unit of quantity in an order. Common situation for an order book includes a "Bid-Ask Spread" area that is the price margin between the highest bid and the lower ask price. In this scenario, we will define the buying-price as the lowest ask price, since that's the price at which I currently can buy anything, and selling-price will be defined as highest bid price, as that's the most expensive price I can currently sell.

In case of our energy market we face a special situation at which energy we may want to sell may not have been created yet. This will lead into a situation where we have some overlapping between sell and buy orders.

Price – Quantity (Sell)	Price – Quantity (Buy)
...	
0.61 – 300	
0.60 – 200	
0.56 – 250 ← Lowest Ask	
0.55 – 100	0.55 – 200 ← Highest Bid
0.53 – 150	0.53 – 250
	0.51 – 300
	0.50 – 250
	0.48 – 100
	...

EGS Platform Order Book Example

In this case, we have some orders with asking price lower than the highest bidding price, however, the people that created those orders don't have enough energy balance to execute. In this case, if user wants to buy energy right away, they will need to match the price of the first seller with currently available energy however, we will still define market prices per the order book, regardless of energy being available or not.

Another specify of our market is energy storage. Currently energy storage isn't being manufactured at a cheap-enough price to be considered a commodity. Current energy storage prices can range between 5500$ for a 14KWh Powerwall supplied by Tesla ~400$ / KWh capacity to ~200$/KWh for utility-scale battery capacity. On top of that, not only battery creates pressure from pricing point of view but also from physical location point of view. Per BYD own website, 800KWh is the maximum capacity that can be fitted within a 40ft container with an area size of approximately 30 sqm.

Connected Houses	Average Energy Stored per Household	Battery Size [1]	Total Energy Storage Price [2]	Total Energy Storage Area
100	0.5 KWh	75 KWh	15.000 $	30sqm
100	2 KWh	300 KWh	60.000 $	
100	4 KWh	600 KWh	120.000 $	
500	0.5 KWh	375 KWh	75.000 $	
500	2 KWh	1500 KWh	250.000 $	60sqm
500	4 KWh	3000 KWh	500.000 $	120sqm

Price and Area requirements for different micro-grid populations

[1] Battery size has been calculated with the expectation of being able to store 150% of the total average user energy balance.

[2] We use 200$ as the KWh capacity price. Installation costs, land costs and other secondary costs have been ignored.

On this Figure we can compare the total cost for different micro-grid sizes per the average energy being stored by every household. Using the 200$ / KWh price and with required capacity as 50% higher than the average balance hold by our users, the per user

average stored KWh capacity goes at around 300$. This places two main priorities for us to be able to sustain the system.

First, we need to ensure that we have mechanisms to minimize the battery usage per user to avoid battery costs from sky-rocketing and consequently we will limit the maximum amount a user can store. To calculate the desired maximum balance (Bmax) per a target energy storage cost per user (Cu), and assuming users average balance to be around half the maximum, we can define the equation as:

$$C_u = (0.5 * B_{Max}) * \frac{300\$}{KWh}$$

$$C_u = B_{Max} * \frac{150\$}{KWh}$$

$$B_{Max} = C_u * \frac{KWh}{150\$}$$

Calculating Maximum Balance per a target cost per user

Second, we need to ensure that users have a mechanism that allows them to sell energy automatically to avoid loss of profit. To allow users to automatically sell energy, we will use a Zero Intelligence (ZI) agent. In our case, we will use a ZI for which a user can only define the target purchase and selling price and our platform will automatically buy and sell once a given balance threshold is reached and no other buy or sell order exists.

Because we have a maximum amount of energy a user can hold as balance, we may incur into a situation in which users have purchase orders that are issued but can't be executed until the user's balance decreases.

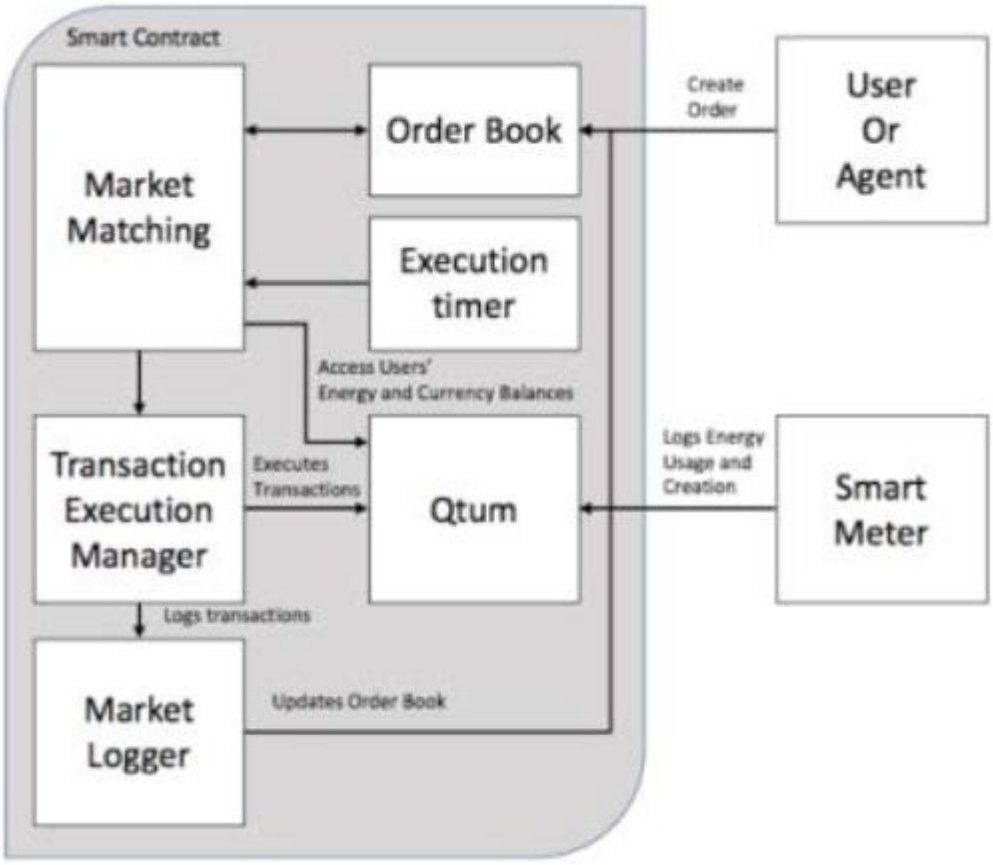
7.4 Software Implementation

For our software implementation, we need to differentiate three different actors:

-Users or Agents: External actors, can operate over users' order book.

-Business Logic Units: Execute, calculate or hold data regarding users' balance, orders or transaction history.

-Smart Meter: Can report energy usage and energy creation and consequently increment and decrement balances.



Market Software Implementation diagram

On our platform, we will use the GESC blockchain as a central data source to record and account users' energy transactions. We will consider a transaction the following actions:

-Energy being added or removed because of smart meter account

-Currency being added or removed because of users' actions

-Currency being transferred between users as energy payments

-Energy being transferred between users

-Energy being transferred between users

-Energy transfer between battery and intelligent machine equipment

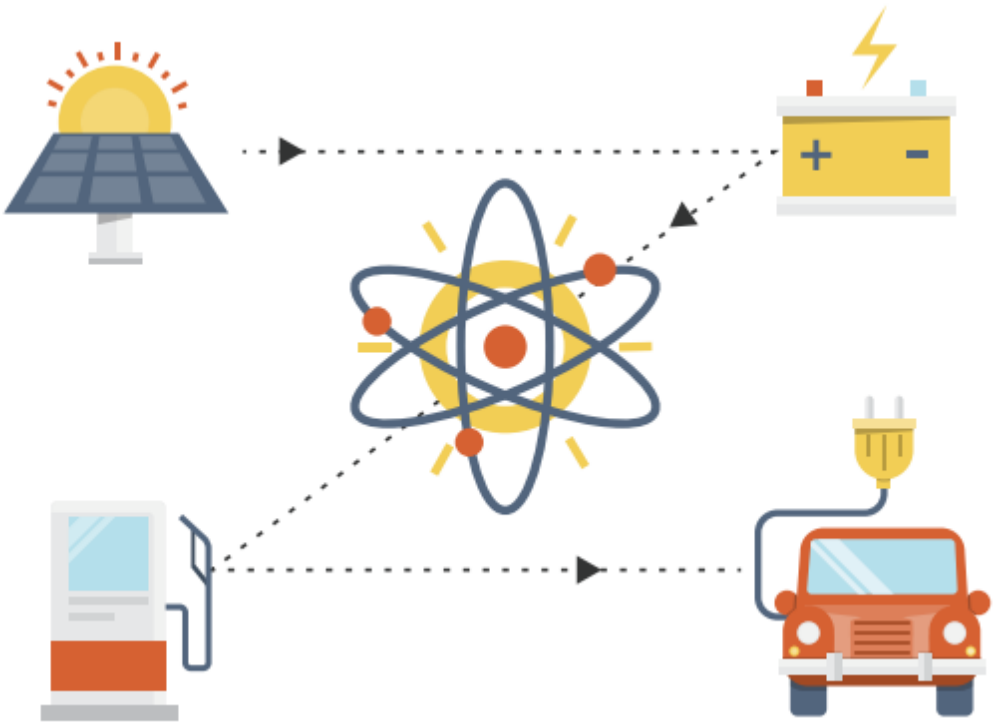
We will also use a smart contract within EGSC to write and handle the different parts of our business logic.

8. Charging Service for New Energy Vehicles

We believe the future of electricity trading is happening not just between people, but also between machines: between electric vehicles and charging stations; robots and chargers, to name just a few.

Take new energy vehicles and charging stations, which is a typical case of energy trading. We give new energy vehicles and charging stations unique and human-like digital ID on blockchains. Since charging stations are connected to the distributed energy storage

equipment in the micro grids, new energy vehicles, upon accessing charging stations in DAE communities, can fulfill the purchase in a given energy exchange and the payment to the charging station for the energy asset (using non-fiat currency), the whole process done unattended.Such a future enhances utilization of clean energy generated in communities, increases supply and makes energy source traceable, thus making new energy vehicles even cleaner. Arbitrary pricing and unfriendly payment methods will become yesterday's story. The future, through EGS's new energy vehicles charging service, sees a standard electricity price and payment method within any given community. The only difference is the service fee charged by different charging stations.



9. Battery storage and repair services

Battery, lead-acid batteries in the strict sense does not belong to the new energy, but it is a real green renewable energy, but based on renewable technology restrictions, which is after all, have a certain life But if we improve the current reworking of lead-acid battery technology and restore and extend the life of Xtender Battery Regenerators for a wide range of lead-acid batteries of all sizes and types, including submersion, gel, AGM and VRLA, Reduce battery damage to the environment.

We will take advantage of new technologies to rebuild the batteries needed for battery reunification in the EGS network co-ordination, which will be more conducive to the activation of green energy in the community, increase demand side of the supply, so that the original pollution of the battery industry become more clean.

10.EGS Ecosystem

10.1 Energy trade and management APP

The EGS network enables users of different regions and micro girds to trade or share energy on certain APPs (Android/IOS). It's also capable of collecting data and running analysis on both production and consumption end (Q1, 2017 has already delivered that.). Going into the future, it will serve as smart home apps, controlling energy use through AI and offering meticulous energy management (This feature is expected to be launched in Q2, 2018).

10.2 Wallet

EGS wallet is an APP managing users' token asset. Users can create new accounts, transfer EEA and future tokens in the OTUM ecosystem, import or export private keys, and view the status and trading history of EEA.

10.3 Exchange

Because the EGs network will reach all over the world, users in different countries can trade between different currencies and EA through official exchanges and global mainstream exchanges, and we will start with sales in South Korea, Singapore, Hong Kong Malaysia and Taiwan Launch Official Circulation Exchanges to Meet Complex Environments Cluster Applications.

10.4 Smart meters and charging stations

EGS and its partners supply smart meters and charging stations that meet the measurement requirements and technology standards of the country installing those facilities. To access EGS network and EGSC community, prosumers and traditional electricity users will have to install smart meters that can run in EGS environment. Charging stations for new energy vehicles will be connected to the EGS network and be upgraded to be compatible with it.

11.Team

11.1 Core Founding Team

-Dongok

Dongok is a software developer with more than 10 years of software development manager who designed and implemented a system optimized for large-scale transaction processing such as eBay, KT. He has jointly developed ICON founding applications . The current EGS technical director, is also the initiator of EGS. He was excited about implementing the new technology and was honored to contribute to the future of the EGS blockchain.

- Park Chan bae

Chan bae is a software engineer and has an applied physics background. When he first contacted Ethereum in 2015, he was working for a start-up financial company and made a dollar transfer between users through traditional payment methods. He later joined the EGs in 2017, engaging in non-licensing innovation. He has held leadership positions in energy customer engagement projects with many Fortune 500 companies and is keen on Ethereum and IoT infrastructure development.He is the chief executive of EGS's Asia Pacific market expansion now.

-Karl Greeder

Karl graduated from the University of Texas in Austin. During his studies, he focused on advanced battery technology and received a doctorate in materials science. Prior to his degree, Carl served at the Southwestern Institute in the United States, where he established the Energy Storage Systems Assessment and Safety (EssEs) coalition. The consortium is engaged in the testing, qualification and research of large lithium-ion battery energy storage devices with capacities greater than 10kWh. The EssEs alliance consists of 12 members in the field, they come from three continents, a budget of 300 million.

-Klaudia. Bob

Klaudia, a doctoral candidate at Cluj-Napoca Institute of Technology and a teaching assistant at the university, is passionate about computer science and has built sumo wrestlers, digitized projects for local communities and Participated in some European research projects. She likes to work as a teacher, hoping to influence more.

-Chen Fei Fei

Fei Fei is a UX/UI designer that provides users with an end-user experience of blockchain technology. Born and raised in Beijing, she obtained a master's degree in digital media from the University of Washington and turned to the blockchain and the world of Ethereum after learning how decentralization will change the global financial legal infrastructure. After joining EGS, Fifi worked on various Ethereum space projects and DApps, including developer tools accounting platforms, stable coins, token services and more.

-Matt Walters

Matt. Walters is a software engineer who has been in the healthcare, retail, advertising and finance industries for more than a decade. He was the founder of GoChime and was acquired by BounceX. He had designed open-source software for Electronifie and was later sold to TruMid, where he consulted with consulting and training services in teams like The Associated Press, Shutterstock, TD Securities, Clearinghouse and startups like Koko Fit Club.

-Pat Beldugi

Pat is a software engineer and EGS legal counsel. Before joining, Pat-Beldugi Pat worked for Sullivan & Cromwell Law Firm for seven years and was a founding member of a medical technology company. Pat Subverts Innovations in Existing Industries, Markets and Networks with Blockchain Technology and Law, Software Engineers and Entrepreneurship.

-Matt Potter

Matt Potter is an expert in Xtender battery regenerators. His extensive technical background enables Matt to fully assist companies in selecting the best battery regeneration system to suit their unique business. Whether you are looking to conserve and extend battery life by retiring your old batteries or looking to increase revenue for your customers by providing battery regeneration, Matt can guide you through the process of choosing the best Xtender system for your needs. Learn how your business benefits from Xtender battery regenerators.

11.2 Partners and Investors

- Taiwan Miracle Green

Miracle Green Energy is a subsidiary of Maroo MCS Technology Group established in

2002. It specializes in manufacturing and sales of R & D and equipment for lead-acid battery regeneration technology throughout Korea, Taiwan, the Philippines, Thailand Malaysia and Indonesia. It has successively expanded its business in Japan, Mainland China, India and Sri Lanka. Its territory extends from Northeast Asia to Southeast Asia, forming a complete channel of sales and service. The range covers all Asian countries and regions, long-distance operation regulations Painting, but also actively toward Europe and the United States advanced countries to enter, architecture - covering the world's battery regeneration and energy saving service network.

- Taiwan Xin Pan

Xin Pan Co., Ltd. (hereinafter referred to Xin Pan) has won many patents and the recognition of national quality awards, but also Taiwan's only successful R & D and manufacturing lead-acid battery repair equipment business, the future will open up markets in mainland China and Southeast Asia, but also planning the layout of the world market.

-Singapore EMARCO

Singapore EMARCO company, mainly in the Asia Pacific region and other countries of the trading business. EMARCO is an exclusive licensee seller and exporter of Fullmark branded imaging and computer consumables. EMARCO's products are mainly MyGreenOil fuel reformer, BioNumac natural phytonutrients and EcoRider personal mobility truck.

-Germany Timing Coolant

Germany Timing Coolant is a Timing Coolant-based company that specializes in the production of timed, anhydrous coolants. Its primary role is to prevent overheating (up to 190 ° C), prevent corrosion (extend product life by 10 or 500,000 km), oil base coolant Engine performance and acceleration) and reduce fuel consumption and engine noises.

-US Xtender

Xtender is committed to battery regeneration recovery, which can effectively extend the service life of various specifications and types of lead-acid batteries (including submerged,

gel, AGM and VRLA). Its applications are mainly in the electric vehicle, golf cart, telecom and battery backup (UPS) markets in the material handling market.

-Korea KHI Investment Company

Korea High Tech Investment (KHI), abbreviated as "KHI", is Korea's first portal naver. com founders to invest strategically in South Korea's advanced Internet and mobile value-added services company.

-Korea Electric (KEPCO)

Korea Electric Power Corporation (KEPCO) is the only power company in Korea that specializes in electricity and gas Supply of power transmission, distribution and related business research and development; investment, construction and other government projects handed over. 12. The Development Process was established in May 2017 as early as February to prepare for blockchain energy related R & D and design as well as seed round investment from Korea KHI Investment Company. Then he won the strategic investment of Korean power company.

12.Development Process

It was established in May 2017 as early as February to prepare for blockchain energy related R & D and design as well as seed round investment from Korea KHI Investment Company.

EGS was also the pioneer of the energy blockchain in June and August 2017 at Event Horizon 2017 in Vienna and the Asian Cleantech Forum at Asian Development Bank in Manila as Startup The project debuted and promoted the EGsc community based on blockchain, which is favored by energy companies and governments in many countries.

As a early practitioner of energy blockchain, EGS labs also appeared in Event Horizon in Vienna (February 2017) and the Clean Tech 2017 hold by ASIA DEVELOPMENT BANK in Manila(June) as guest speaker with our Startup project, promoting the DAE community based on the blockchain, which was favoured by government and energy company in each country.

EGS has planned to set up a joint venture with energy companies in target markets in Australia and Southeast Asia. We expect to complete a total of 500 MW of EGSC communities by the end of 2019.

Team May 2017 Established project proposal

June 2017 Completed the technical solution and Market Research

January 2018 Completed the overall project plan, blockchain plan and EEA transaction model

Completed the white paper issuance in February 2018 and shipped the platform online

April 2018 Smart meter prototype research and development completed

May 2018 Smart meter South Korea's first EGSC Community

September 2018 Partner Battery Statistics and Community Engagement

October 2018 EV Charging Service

January 2019 Malaysia 300MW Community

September 2019 Europe and the United States 4 Cumulative 200MW

13.Disclaimer

This document is for informational purposes only and does not constitute the opinion of you on buying or selling EGS or securities. Any such proposals or solicitation will be made under a credible term and with the applicable securities laws and other relevant laws permitting the above information or analysis not to constitute investment decisions or specific recommendations. This document does not constitute any investment advice, investment intentions or instigation of investment in the form of securities. This document does not constitute or understand any offer or purchase or sale of any form of securities nor is it a contract or promise of any kind.

Energy Sharing (EGS) provides users with a clear understanding of the virtual currency market risks to those who are interested. Once investors participate in the investment, they understand and accept the risks of the project and are willing to undertake all the corresponding results or consequences for them. EGS makes it clear that it will not be liable for any direct or indirect damages whatsoever arising from participation in the Energy Sharing (EGS) Project including but not limited to the following:

1. Economic loss due to user transaction

2. Any errors, omissions or inaccuracies generated by the individual's understanding of the losses caused by the transactions of various blockchain assets by

3. individuals and any resulting actions

4. On the specific exchange risk. The project team does not promise to go to the specific exchange, investors are required to know the risk.

5. Energy sharing (EGS) in the third party platform for the breach of contract, breach, infringement, collapse, paralysis, termination or suspension of service, fraud, misuse, improper Failure, negligence, bankruptcy, liquidation, dissolution or winding up.

6. Energy Sharing (EGS) is classified or deemed to be in the currency of any government, quasi-government agency, authority or public agency, securities, commercial paper, Notes, investments or other things that are subject to prohibitions, regulatory or legal restrictions.

7. Other unforeseen risks.