



## **New Energy Blockchain Project White Paper**

### **Green Energy Trading Platform**

**V0.2-Beta**

**(Beta)**

**(This version of the white paper is for internal circulation, reference only, does not represent the actual intention of the future, and does not have any reference value.)**

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## Abstract

*Trust is a key factor in human organization and social collaboration. Since ancient times, people have been using different technologies, legal systems, and organizational methods to establish collaborative trust in various fields. Trust has also become the first source of cost for collaboration in social and economic fields. In the efforts made by people to establish "trust," they also formed a means of building trust in different dimensions such as "rule of law, technology, and community.*

## 1 Energy Market

Electricity is a key driver of social progress. At present, the global population is 84% electrified. No matter it is a developed or a transitional economy, it needs to obtain safe modern energy in order to consolidate its steady development and prosperity. In developing countries, access to affordable, reliable energy is crucial. Reducing poverty, improving health, increasing productivity, increasing competitiveness, and promoting economic growth all require safe energy supplies.

### 1.1 Market Situation

In the past two decades, hundreds of millions of people (especially in China and India) have obtained modern energy through the power transmission network. This means that: As compared with any other time in the past, more people on Earth can enjoy the convenience of the growing interconnected electricity network. This creates a huge market space for innovative peer-to-peer (P2P) new energy trading platforms.

In addition to the above static electricity consumers (office buildings, factories, apartments, and houses), non-static electricity users are pushing the demand for global electricity.

In 2015, the global threshold for electric vehicles (EV) exceeded 1 million, and the total number reached 1.26 million. In order to serve this growing electric fleet, the global electric vehicle charging station is estimated to have reached 1.4 million. It is estimated that by 2025, electric vehicles are expected to reach the price level of the internal combustion engine vehicles mainly due to the decrease in battery costs and the increase in density.

The electric vehicle market forecast is as follows:

By 2020, 2 million to 20 million electric vehicles will be used worldwide;

By 2025, 18 million to 60 million electric vehicles will be used;

By 2030, 22 million to 140 million electric vehicles will be used.

The vertically integrated public facilities are located in the system and, like the spider web, transfer the network to the last consumer who wants to connect: they decide when and where to build the power station. They decide how to bridge the distance between the generator and the load.

Although progressive public facilities and regulatory agencies try to position themselves as consumer-centric business models. But the reality is that even the most advanced public facilities and regulatory agencies simply retell the narrative of pushing citizens into the consumer category. Close to the umbilical cord of the electricity network, consumers get a stable price. Energy security costs can be calculated by controlling certainty and economic independence.

However, the global technological revolution has changed the balance of power between consumers and the central authority. The distributed energy (DER) market, such as booming solar PV systems, batteries, microgrids and embedded networks, has shifted the balance of power from the central authority to the edge of the grid and to where citizens can monitor. This not only serves to control the cost of energy consumption, but also reflects people's just-needed. Their energy supply is more sustainable, more socially responsible, more localized, and more flexible, so that daily citizens can participate in creating the future of energy.

## 1.2 Energy Revolution

In New York in 2012, Hurricane Sandy destroyed the concept of a century-old public power supply and foreshadowed the arrival of a new era of flexible, light traditional distributed energy supply.

In China as of the end of 2016, total installed renewable energy capacity was 217 million kilowatts, which accounted for approximately 30% of the global cumulative capacity. In the future, the new power generation installed on residential roofs will exceed the transmission grid. If the forecasts of the regulatory agencies are correct, the power grid business will face several hundred million yuan in revenue losses due to the surge in rooftop photovoltaics and the reduction in the load caused by the use of distributed energy storage.

The dilemma faced by the traditional energy supply industry is that, at certain stages, self-sufficient power supply provides cheaper, more reliable, and cleaner energy than relying on the power grid. This situation may occur within five years, or it may occur within two years (according to the investigation of some consumers, this situation has already occurred, see diagram below).

We need to accept the fact that if the energy network's sole purpose is to provide energy, it will inevitably encounter severe competition from distributed energy resources (DER). Traditional grids may be eliminated by distributed, diversified sources of energy. This trend has begun to stabilize. The future energy system needs a better solution, which helps to maintain the value of existing network assets, while reducing the investment risk of decentralizing future energy systems.

The plan is to redesign the traditional electricity network as a decentralized, trust-free trading platform.

The rapid infiltration of decentralized energy resources means that we now have a delivery system featuring two-way energy flows and millions of active consumers. At the residential level, consumers are replenishing energy into the network, but feel that their power contribution has not received the due return. A value-exchange network that allows consumers to achieve fair returns from distributed energy resource (DER) investments will encourage greater investment in distributed renewable energy and promote a new era in power network management. This new paradigm will lead to increasing levels of automation and flexibility, with millions of micro-investments distributed throughout the system, rather than a few large-scale, centralized investments.



### 1.3 A Trustless Trading Platform

Creating a trust-based trading platform is a network that enables consumers to sell energy to others in a trustless environment. It is a new component of the distributed

economy that allows consumers to realize the value of their investment in DER by allowing them to monetize their excess energy in much the same way as Uber and Airbnb allow people to monetize their cars and spare rooms.

A trading platform that requires third-party settlement and reconciliation of millions of transactions between hundreds of thousands of traders across 5-minute trading intervals would be almost impossible to support without a central player taking control of all parties' data, prescribing fees, requiring trust, proving accuracy and binding the market up in red tape and bureaucracy.

But the blockchain is an agreement machine that can facilitate the financial settlement of these transactions, in the same trading intervals in which the energy is produced and consumed, and it can be achieved at a speed not possible using current market settlement technologies.

Blockchain-enabled P2P energy trading will transform energy networks into trading platforms and invoke a transactive economy that moves away from bilateral retail arrangements to multi-lateral trading ecosystems, preserving networks' relevance to consumers.

#### **1.4 Blockchain Technology**

Blockchain is a software innovation for establishing digital trust between users facilitating transactions of value, over a network. The blockchain enables trust to be distributed throughout a network, without the need for a central intermediary to track, verify and approve the digital exchange of value. The notion of authorizing trust from a central intermediary currently underpins both private and government institutional structures, however this is proving to be costly, slow, and also vulnerable to attack. The blockchain overcomes these issues by operating as a decentralized distributed database, maintaining a continuously growing list of records called blocks. Although blockchain

technology is still an emergent one, current applications show it can be better, more efficient and more secure than traditional systems, which is why banks and governments globally are beginning to experiment with it.

## 1.5 Smart Contracts

On-chain computer code or “Smart Contracts” are computer protocols that facilitate, verify, or enforce the performance of a contract making a contractual clause unnecessary.

Smart contracts can exchange money, property, shares or anything of value in a transparent, conflict-free way, while avoiding the services of a middleman. Ordinarily, a process would require payment to a middleman, government agency, bank, lawyer or a notary, and then a processing time before the receipt of goods or services. However, with smart contract technology it can all be automated.

Smart contract technology can be compared to that of an automated vending machine. With a vending machine, money is deposited into the vending machine and the desired item drops for collection, provided that the correct amount is deposited.

Comparable to that, with a smart contract, the money is deposited into escrow on the blockchain for receipt of a transfer of a token (e.g. a digital certificate of title for a house), which is instantaneously transferred into a counterparty’s control once conditions are met. Smart contracts not only define the terms and conditions around an agreement in the same way that a traditional contract does, but also provide enforcement of those obligations.

## 1.6 Energy Trading Platform

It is not just network service providers that benefit from maintaining the relevance of one of our most important social assets. The people that have the most to lose in the face of falling network utilization are the people that have the least ability to influence their exposure to rising network costs and the impact on grid-supplied energy. The financially and socially marginalized renters, the huge number of tenants living in group housing developments and even those whose homes are oriented in the wrong direction or are exposed to shading from nearby buildings or trees, are the people who will bear the impact of falling network utilization if we do not find a way to incentivize Prosumers to stick tight to the network.

Unlike the centrally-managed power systems of the past, the future of the energy system, will be co-created by the prosumers and investors that will decide where and when to install DER.

## 1.7 Human Energy

Energy trading between citizens brings humanity to the energy system.

Instead of faceless traders hedging their positions, Citizen Utilities return profits to communities, incentivize community investments in generating assets, and allow the sharing or gifting of energy. Ultimately, as dynamic distributed energy markets become mainstream, the owners of DERs can earn an income, not just from the energy they sell but from the network services they provide such as frequency and voltage control, load shifting, load shaping and load sinking. EVs will become the back-up power source of choice as the owners of EVs monetize their spare energy, not through selling kilowatt hours but by selling resilient access to the lifestyles we take for granted.

In aspiring communities building modern economies through electrification, citizen-owned microgrids are a leap in technology that by-passes the mistakes of the

past and supports the development of low-cost, low-carbon, and democratic power systems in towns and gated communities all over the developing world.

In modern cities, Neo-retailers, the new species of innovative energy retailer, will support P2P trading through effective aggregation of consumer preference and demand aligned transparently, with prosumer capacity managing risk and security and providing choice for consumers.

Human energy will change the face of the energy system because instead of being focused solely on profits, it will focus on the broader needs of communities, on aspirations for independence and co-creation, and the long-term sustainability of energy creation and consumption.

## 1.8 UEC Energy Book Ecological Platform

The UEC energy book ecological platform is to solve the above problems and adapt to the market's confidence-free, transparent and interactive operation of the energy trading platform system through blockchain technology. The energy trading digital certificate of the ecosystem can be traded and frictionless. and supports the continuous expansion of energy application suites. Hereinafter referred to as: UEC ecosystem.

## 2.0 Platform Applications

The UEC ecosystem supports more and more energy trading applications. Below is a list of future development plans.

### 2.1 P2P Trading

This class of Platform Application gives retailers the ability to empower consumers (or in an unregulated environment, the consumers themselves) to simply trade electricity with one another and receive payment in real-time from an automated and trustless reconciliation and settlement system. There are many other immediate benefits such as being able to select a clean energy source, trade with neighbors, receive more money

for excess power, benefit from transparency of all your trades on a blockchain, and very low-cost settlement costs, all leading to lower power bills and improved returns for investments in distributed renewables.

## 2.2 Microgrid/ Embedded Network Operator/ Strata

This type of Platform Application enables electricity metering, big data acquisition, rapid micro-transactions, and grid management at an unprecedented granular scale. Trading in embedded networks breaks the nexus between generation ownership and energy consumption, meaning value can be derived from an investment in DER even if the investor is absent or doesn't consume all the energy they generate.

## 2.3 Autonomous Asset (AA) Management

This current Platform Application allows for :

- (1) shared ownership of renewable energy assets and ;
- ( 2 ) trading renewable asset ownership. The AA is able to buy and sell its own electricity and distribute its income to assigned wallet addresses.

## 2.4 Carbon Trading

This Platform Application class offers smart contracts for carbon traders to assure digital transactions across organizations: credibility of asset using immutable distributed ledger technology; and transparency and auditability. It supports reporting and surrendering of carbon credits or certificates to regulatory authorities.

## 2.5 Distributed Market Management

This Platform Application provides optimized metering data, the collection of big data, right to access and dispatch of assets, rapid transaction settlement, network load balancing, frequency management, demand side response, and demand side and load

management. The optimization of network assets is made viable by the near real-time remuneration of asset owners.

## 2.6 Transmission Exchange

In the management of transmission networks, the Platform can provide real time metering data, collection of big data, right to access and dispatch assets, rapid transaction settlement, and network load balancing, responding to non-stationary energy.

## 2.7 Future Plan

- 1) . Look for a way to integrate individuals from high-density housing into a prosperous distributed shared energy economy;
- 2) . Recreating power networks to power the connection of distributed energy resources (DER);
- 3) . Reduce the risk of high-value cyber assets up to several billion yuan and energy waste.

At present, we have a large number of power station management data, laying the groundwork for asset management registration, and implementing P2P energy trading platforms, asset management, and dual TOKEN ecology.

## 3 UEC Team

### 3.1 Team Member

#### **Hevin Young**

Shenzhen Yingge Yixin Smart Home Co., Ltd. was established in 2013. It led the team to join the Shenzhen-Hong Kong-Macao Smart Campus Alliance and promoted the development of China's smart park (industrial park) technology. It has extensive experience in IoT system projects;

In 2015, Yingge Yixin Intelligent Technology Co., Ltd. was established in Dongguan City and initiated the “Plant a Sun” campaign to establish “Youneng Photovoltaic” Distributed Energy Service Platform. This platform project won several entrepreneurial awards and joined hands with Beijing Capital Group in 2017. Promote the development of China's photovoltaic industry. Mr. Yang Fan is proficient in cross-border fields such as corporate management, human resources management, finance, and IT. In the same year, he was awarded the National Grade Two Intelligent Building Manager and the National Level Two Solar Energy Utilization Worker and was named the top ten cutting-edge entrepreneurs in 2017. As a senior player of the early blockchain certification and a proponent of the application theory of blockchain technology, it has combined the real economic strength of Youneng Solar and Jingneng Group to invest in the UEC blockchain project.

#### **Nick G**

Years of experience in the development of IoT hardware, members of the China z-wave alliance in the world, successively developed the low-power z-Wava and ZigBee gateway core chip programs for IoT, and worked on CPU, SoC, ASIC, DSP design and application algorithms. The computer architecture, chip design, and hardware and

interactions provide insights; In 2015, he participated in the design and development of the platform architecture of Youneng Distributed Energy Management System and developed a centralized energy transaction settlement service.

Participate in the investment in the UEC blockchain R&D project, and engage in the research and development of decentralized application of energy data, and promote the research and development of the IoT industry system such as energy microgrids, inverters, energy storage and charging piles.

### **Eric LIN**

Lin Dishui, Ph.D., of New Energy University, Oregon State University, USA, received the ICSP Top Student Social Services Scholarship for two consecutive years during school, and won the first place in the MBA Business Planning competition team.

Global Certified PMP Project Manager who once worked as a Venture Capital Analyst in Oregon State University Commercialization. Participated in various blockchain communications during his stay abroad. He is familiar with the underlying technology of blockchain products. After returning to China, he is engaged in trade import financial customer management. With many years of experience in financial investment and product management, at the same time as the core founder of "Canon PV" energy service platform.

### **Allen Su**

System design and software development experience has been engaged in the electronic financial industry and the internet of things industry. He has implemented the bank transaction monitoring system, transaction reconciliation system, the

development and access of the font size system, the dominant distributed photovoltaic monitoring system, and charging pile management. The systematic product

development has rich experience and profound understanding of financial transaction clearing and IoT hardware and software communications. Focus on system architecture optimization, business process optimization, database structure optimization, and unique insights on product optimization.

## **Starry Chen**

National system integration project management engineer, 6 years of product design, mobile Internet development experience, has rich experience in software and hardware communication development, mobile operation and maintenance development, focusing on mobile direction product customization, and put forward effective industry solutions.

## **4 Technical frameworks**

### **4.1 Introduction**

The UEC platform is an ecosystem that can achieve interoperability between multiple market management/pricing mechanisms and power units (kWh) through the purchased UEToken. UEC Platform provides a transparent governance framework that allows the Ecosystem to interface with energy markets around the globe seamlessly, bringing innovation and a wide range of network benefits to consumers.

This approach means the Ecosystem is adaptable and scalable for applications within any existing or future regulatory environment, achieving the dynamic agility required

to adapt to any quantity regulatory structures. This dynamic agility allows a redefinition of Application Hosts (utilities, retailers, property managers, etc.) and customers (users) are positioned in the Ecosystem and who has market power in any interactive arrangement. The market flexibility of the Ecosystem is facilitated by deploying a dual token Ecosystem (UEToken and UEGas) at its two blockchain layers.

UEToken are the frictionless blockchain tokens that allow Application Hosts and Participants to access and use the Platform (such as a limited software licensing permission). Application Hosts are entities and businesses that run an Application on the Platform. For example, utility companies and electronic fee-based services using the Platform will become Application Hosts. A Decentralized Autonomous Organization can also become an Application Host.

UEToken and UEGas can be interchanged to connect the functions of the Ecosystem. UEGas maintain a steady exchange rate between local market electricity prices and the exchange priced UEToken.

## 4.2 Dual Token Ecosystem

To synchronize the Ecosystem globally and create cross-market electricity compatibility, UEToken will be used for Ecosystem transactions. The UEToken are priced, issued and redeemed by the market participants' local market conditions.

Having a sufficient amount of UEToken allows Application Hosts to access the Ecosystem from where they can convert their UEToken to UEGas and provide services on their customer base. UEToken are required to generate UEGas. UEGas are a local market level token and are priced for the exchange market they are deployed in.

## 4.3 UEToken

UEToken allow the Application Hosts and their consumers to gain access to the P2P trading functions and other UEC applications.

As an example, an Application Host needs to purchase enough UEToken to generate the necessary UEGas for their consumers to conduct electricity transactions in their home market. The Application Hosts need to maintain a sufficient number of UEToken to generate the necessary UEGas required, for their consumer base.

In a deregulated market, where Participants are able to trade directly with each other without the need for intermediaries, Participants will be able to convert their UEToken to UEGas directly and transact on the platform without an Application Host.

To use services on the Platform each Application Host will require UEToken to transact for UEGas, in their local jurisdiction. UEToken can be regarded as the global token that open access to the Platform for all Participants, to join the system. The UEToken are the access token, just like a software license, that grants ability for Application Hosts to transact on the Platform, through trading UEToken for UEGas. Once the application host exhaust all UETokens, they can no longer trade on the platform until they get more UETokens to provide platform access.

#### 4.4 UEGas

UEGas will serve as the fuel of the UEC Ecosystem.

UEGas help to facilitate low cost and better returns on electricity. They interact with the Ecosystem through:

- / Providing governance and consumer protection through Smart Bond technology
- / Facilitating the use of Platform
- / Providing loyalty rewards to Participants

Connecting with renewable energy charities and organizations

Providing access priority to Asset Germination Events and benefits from an asset's 'POWER' generation

#### 4.5 UEToken Function and Smart Bond

For current market participants, the UEToken will provide not only access to the network, but also the Intelligent binding functionalities.

UEToken from the growth pool will be gifted to incentivize Application Hosts to use and contribute to the development of the Platform Applications and Consumers to facilitate its global influence.

Application Hosts such as Energy Retailers and Network Utilities will be required to provide the UEToken as guarantee for the UEGas they receive from the Platform. The UEGas are then used to transact electricity between their Customers in their home market. UEToken will be escrowed for UEGas in an Ethereum Smart Bond , and can only be unlocked from the Smart Bond when UEGas is returned.

It is expected that Application Hosts will need to acquire more UEToken over time to facilitate an increase in transactions as the growth of their consumer base and the technology becomes more widely adopted. The more UEToken that are escrowed for UEGas, the more organic demand is created for the UEToken.

The Smart Bond contract will ensure consumer protection in the event of the failure of an Application Host (i.e. bankruptcy). P2P Consumers are able to redeem their UEGas directly, instead of UEToken previously provided as guarantees and port to another Application Host.

#### 4.6 UEToken are Incentive Token

All companies that Production consumers and Consumers purchasing renewable energy will be rewarded UEToken, under the Green Energy Loyalty Rewards program, for using the Platform. The incentive formula is weighted towards renewable energy producers. The Loyalty Incentive Program is funded by charging a small fee for all P2P transactions on the Platform. Part of the fee is then used to purchase UEToken on exchanges and distribute them according to the plan to stimulate renewable energy generation.

The goal of the UEToken is to ensure that incentives for Developers, Application Hosts, and Participants are all aligned and, as they contribute to the democratization of energy, they are rewarded for the evolution and future success of the UEC Ecosystem. As the Ecosystem user-base grows, the demand for UEToken™ will likely increase.

For the Platform to be truly global and decentralized, the UEToken may in the future facilitate Green Energy Generation Initiatives, driving sustainability in the future. Customers could donate a small portion of their transactions to charities and/or organizations that contribute towards innovative renewable and sustainable energy projects.

Through the supporting of P2P clean energy trading and Green Energy Generation Initiatives, more users will be incentivized to adopt the Platform, and thus create a virtuous cycle for sustainable energy.

#### 4.7 UEToken and Exchange

The standardized Ethereum ERC20 UEToken may also be used on public exchanges. Exchanges are independent and not operated by UEC. However, Exchanges serve to

further decentralize and add transparency to UEToken, by giving the holders of UEToken the choice to exit or enter the token Platform.

UEToken provide efficiency in the ease of transfer for clean energy. Participants with UEToken will be able to instantly transact through an Application Host once the Platform inhabited and appeared the requisite regulatory framework emerges in their region. As the markets become fully deregulated, the Participants will be able to transact directly through the platform without the requirement for Application Hosts.

Prosumers and Consumers of the UEC Ecosystem will be able to transfer and receive clean green energy credits anywhere in the world as the Platform is gradually rolled out globally. If a Prosumer or Consumer moves to another country, it is not necessary for them to close their account and exit the system. The UEC Ecosystem will be a global Platform that allows users to migrate between applications and instantly transact with their UEToken.

The transparent governance framework at the Ecosystems center will be inclusive by design, allowing application hosts to implement interfaces easily. This will drive early adoption and allows seamless interfacing with energy markets around the world, bringing innovation and a wide range of network benefits to Consumers.

At its core, the focus is providing lower-cost energy and better returns on energy for citizen investors, whilst providing powerful incentives to prioritize the adoption of renewable clean energy.

## 5 Application Layers

Sustainability is one of UEC's core values, therefore, we aim to minimize the energy consumed by any Workload check algorithm. For this reason, a hybrid public and consortium blockchain approach has been selected. UEToken on the public Ethereum

blockchain and a fee-less Ethereum blockchain handle the high transaction volume of P2P energy trading.

## 5.1 Ethereum Blockchain – Public Layer

The Public Layer utilizes the Ethereum blockchain and is where the Ecosystem interfaces with third-party token exchanges. The Public Layer and third-party exchanges operate independently and are outside of UEC Ecosystem's control and provide the most advanced security and decentralization available to the ERC20 standard UEToken. Users may choose to exchange their UEToken publicly or store them and later utilize them within UEC's application software, if/when they become available within the user's local energy marketplace. The common layer provides a mechanism for interacting and transacting with the federation and application layer through the UEToken.

## 5.2 UEC Core

The UEC Core layer is the public smart contracts layer which provides a reliable and open-sourced implementation of the key components of the UEToken Ecosystem: UEToken/ UEGas Exchanges and Smart Bond contract for Application Hosts; Growth pool escrow services for UEToken beneficiaries; Renewable Energy Assets Germination and participation Events; Direct Participant UEToken/ UEGas exchange for participation in deregulated P2P market structures; Oracles using smart contract to gather information external to the blockchain protocol required for internal operations and communicating with the consortium chain.

## 5.3 State Channels

State Channels provide a way to execute blockchain transactions in an off-chain manner by locking the blockchain state utilizing multi-signatures or smart contracts. In order to

update the state, a specific set of Participants must completely agree. Eventually the state will close and sent to the blockchain. Due to the high frequency nature of energy transaction settlement, the Platform will increasingly utilize national channels to handle these events.

## 5.4 Meter Readings

According to the requirements of the application host, the time interval for the meter to read detailed information is 1 to 30 minutes. And it can be displayed to the Participant, in near real-time or 24 hours delayed depending on the hardware and communication network available. Trial readings in 2016 and early 2017 were generally performed every 15-30 minutes, for design and stress testing of the Platform and to provide the most realistic actual trade matching time intervals.

## 5.5 Trade Engine

UEC has developed its own unique transaction matching algorithms which transact available power fairly between average consumers and Consumers without favoring any of the Participants. Consumer orders on both sides of the market are filled in equal increments and cycled continuously, until the market is cleared. In this way, new consumers can immediately join and receive equal access to the renewable energy pools available in their area, whilst minimizing the distance between consumers. It will have an impact on transmission efficiencies and thus minimizing carbon emissions. Trading cycles are configurable and can be selected, based on the requirements of Application Host. They currently range from 5 minutes to 24 hours.

## 5.6 Trading Group Builder

UEC's trading group prioritizes the maximum flexibility in the trading configuration of the various Application Hosts. Individual meters can be grouped and their electricity transacted within market and proximity priority groups.

Platform Participants trade within a specified trading group configured by their Application Host (regulated) or by Power Ledger (unregulated). Participants with remaining import/export kWh will move up the trading priority groups until all remaining kWh are sold.

A Retailer or Neo-Retailer may ultimately fill any remaining orders acting as the “risk manager” or the buyer and seller of last resort.

The trading team can also be determined from the master through the pre-configured network status monitoring. This provides a basic framework for the dynamic allocation of markets within smart networks.

## 5.7 Distributed ledger

The current readings are recorded directly in the blockchain service interface because they are collected from smart meters through a UEC API. All energy transactions are also immediately settled through the interface and provide a safe and reliable audit trail for all participants. Existing designs are used to run multiple private blockchains (assigned to cover geographic areas) and mix into the public blockchain to minimize data mining and maximize scalability.

## 5.8 Consumer Choice

UEC’s Ecosystem puts choice in the hands of the Consumers by allowing them to specify where they want to purchase their energy from.

For example, an energy consumer may choose to pay a premium to ensure that their energy come from locally produced solar energy at buildings built with eco-materials, which incentivizes eco-driven choices.

## 5.9 AUTONOMOUS ASSETS AND ASSET GERMINATION EVENTS

UEC’s current Autonomous Asset (AA) management module allows for shared

ownership and trading of renewable assets. The AA is able to buy and sell its own electricity and distribute its income to assigned wallet addresses. This allows communities to collectively invest in renewable energy infrastructure, and increase the rate we move towards a zero emissions in the future.

## 6.0 Allocation of tokens

Funding Team: 15%

Ecological development: 15%

Strategy/Marketing: 12%

Community feedback: 8%

Technology community Construction: 12%

Institutions and partners: 38%

## 7.0 Disclaimer

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