

Energeticoin: a cryptocurrency solution to speed up the innovation and adoption of new technologies (draft)

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Abstract

Innovation is vital to the long-term prosperity of humanity. However, a major challenge faced by innovative industries is the fast depreciation of their innovative products. Buyers of innovative products, such as solar panels, often find themselves in an economically bad position due to the fast depreciation of these products, despite the bright future of the industry and the vital roles played by the capital of these early buyers. Energeticoin addresses this issue by leveraging game theory to create a decentralized network where buyers of innovative products are rewarded with Energeticoin token ENGK that can be used for discounts and voting rights for community decisions. This offsets their purchase costs while driving demand for ENGK, which helps stabilize its price as the industry grows. Suppliers can also attract more buyers to increase sales of their products by accepting ENGK as part of the current and future payments. Energeticoin is secured by Scrypto, an asset-oriented, user-friendly smart contract language developed by Radix, and the energy-efficient Proof of Spacetime (PoST) consensus mechanism, originally developed by Chia and enhanced for greater security and efficiency, and is partly distributed by proof of innovation purchase (PoIP) to reward such buyers, making it a secure, green, and permission-less decentralized cryptocurrency that fuels the innovation and massive adoption of renewable energy and products of similar innovative industries.

Note: The name Energeticoin is used only for temporary reference and the real name of the project will be disclosed later after trademark registration.

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1. Introduction

Technological innovations are important for the long-term prosperity of humanity and have become a significant portion of the current global economy. For example, renewable energy is a fast-growing industry that already has a market size of \$1 trillion with an 8.5% annual growth rate in a global energy market of \$6 trillion. Solar panels have recently become competitive with fossil fuels for electricity production without government subsidies, positioning them as a major disruptor in the future energy industry.

However, it is still not very attractive economically to invest in solar panels for many people due to the low return on investment and the fast depreciation of the equipment due to continuous technological innovation and future economy of scale. As costs continue to fall, existing government subsidies are likely to diminish, creating uncertainties and risks for solar panel buyers, especially given the extended time required to recoup their investment. The companies selling those panels could go bankrupt during that time so that maintenance would become an issue, further discouraging the purchase. Needless to say, the problem of being not attractive to buyers is not specific to the solar panel industry, but a general problem faced by innovative industries including renewable energy that are characterized by capital-intensive innovation and therefore fast depreciation of the products. While this rapid depreciation is typical for innovative industries, it can be economically disastrous for early buyers, who are often unrewarded despite the crucial role of their money in driving industry growth and paving the way for a better future. There are some solutions already in practice to alleviate this problem in the solar panel industry, such as providing buyers with loans, or providing free installation and selling discounted electricity to home owners. However, none of these solutions offers an incentive high enough for buyers to drive the massive adoption of renewable energy.

This problem looks very like the prisoner's dilemma, in which every player acting for maximizing his/her own benefit with the possibility of cheating would result in an outcome suboptimal for all compared to the situation where they all cooperate. If only every player in innovative industries can be organized coherently together, it would be easy to imagine a scenario where everyone benefits in some way from the growth of the whole industry. Such an organization, if centrally managed, however, would be filled with inefficiency, bias, conflict of interests, and low compliance to its guidance, due to the inherent innovative nature and competitiveness of the industries. Fortunately, decentralized organization is where the cryptocurrency world shines. It is possible to design a cryptocurrency ecosystem, the Energeticoin network, for innovative industries where early buyers become similar to shareholders in a weak sense of the whole industries and would therefore benefit from their future growth that brings better products and rights for discounts even if such benefit may not

necessarily be high enough to solicit investment and may just be offsetting some costs of the purchases. Therefore, more buyers would be willing to buy the innovative products, funneling more capital into the innovation and mass production of these products, and thus promoting the rapid growth of the industries.

Energeticoin is a green cryptocurrency based on the decentralized and energy-efficient consensus mechanism PoST invented by Chia Network and improved by me. PoST uses random data saved on recyclable hard drives as the voting power for network consensus, contrasting with Bitcoin's energy-intensive computational consensus. As a result, PoST consumes <1% of the electricity consumed by equal-value Bitcoin mining equipment while achieving an even higher degree of decentralization compared to the Bitcoin network. Although Chia's original PoST has been attacked by using computation on GPU to fake disk space, I have developed a method to make such computational attack economically unfeasible to restore the original vision of PoST. The excellent decentralization of PoST combined with a secure and Turing-complete smart contract language called Scrypto makes Energeticoin a highly secure and versatile cryptocurrency. Scrypto is asset-oriented, meaning that assets are global first-class objects secured by the guaranteed ownership safety of the Rust programming language, in contrast to being obscurely scattered in smart contracts in most other smart contract languages. Scrypto is therefore simple to use and secure by design. Energeticoin will further build on Scrypto innovative and useful business logic, such as decentralized transparent referral incentives linked to the purchase of innovative products to increase visibility and adoption.

The most important innovation of Energeticoin is its tokenomics that is optimized based on game theory analysis of the several groups of participants, i.e., software developers (Dev) that build Energeticoin, early investors (EI) that make this financially possible, Farmers that secure the blockchain, Suppliers that provide innovative products, Buyers that pay the money to drive the industries forward, industry Experts that decides which innovative products are eligible for participating in PoIP, and late investors (LI) that buy tokens in the secondary market. The tokenomics of Energeticoin aims to fairly distribute its tokens ENGC to all these participants to promote the long-term prosperity of the Energeticoin ecosystem and to stabilize ENGC price to protect the benefit of Buyers and therefore promote innovation. Dev and EI hold the pre-farmed tokens, but have to contractually put most raised fiat money/stable coins to a profit-generating liquidity-providing trading strategy to stabilize token price and to avoid insider trading and token dumping. Farmers receive ENGC through farming and are incentivized to stake their ENGC for easier farming. Suppliers earn ENGC as part of the payment for their products and are incentivized to do so to increase sales. Buyers are rewarded with ENGC for purchasing innovative products, which functions as a form of product incentive rather than an investment return. LI use their real capital to support the price of ENGC to support all other participants, and

benefit from diversifying the risks in their portfolio. Such an arrangement clearly reduces the selling pressure of ENGC and therefore protects the value of ENGC.

To implement PoIP, off-chain verification of innovative product purchase is required. Such verification can only be performed by fallible human operation and can be cheated against. Therefore, PoIP cannot be flawless. However, the purpose of PoIP is purely to distribute ENGC to Buyers and it does not affect the security of the farmer-secured blockchain. To make PoIP a fair and reliable process to fully realize the value of Energeticoin, tokens for PoIP must be governed by reputable and interest-aligned people and governance rules must be followed. Therefore, PoIP will be managed through regulated entities and tokens for PoIP will be held in multi-sig addresses controlled only by people holding doctorate degrees in science and therefore having strong conscience for being honest and having the training to follow good practice, or by people with provable equivalent qualification.

Needless to say, Energeticoin has applications in most innovative industries beyond the renewable energy industry. Here we focus on the renewable energy industry, not because of any limitation of Energeticoin, but because the renewable energy industry is meaningfully enough to be focused on and Energeticoin will grow up from it. It is built in the design of Energeticoin to be able to continuously grow from something easily feasible and gradually expand to ensure maximum probability of success.

2. Blockchain implementation

Energeticoin will be combined from a few of the Chia forks with staking functionality as the consensus layer and from Radix as the application layer. This allows Energeticoin to be built on the existing Chia and Radix ecosystem with a secure network and already tested software. To further facilitate its business logic in innovative industries, Energeticoin will have a few improvements.

Staking is crucial for avoiding token dumps by farmers and securing the blockchain. Most staking blockchains, such as Ethereum and Radix, use proof of stake where earnings are proportional to the tokens staked, no matter whether the stakers run the full node or not. This can make those tokens similar to securities (with investment of money in a common enterprise for profit from the efforts of others). Proof of stake also makes these blockchain easily centralized to large exchanges with huge amounts of user funds. However, staking in Chia forks is very different. Staking is only used to decrease the difficulty for winning blocks in PoST and the reward does not increase linearly with the amount staked so that delegate staking is impractical, making these cryptocurrencies unlikely to be classified as securities due to staking. It is the goal of Energeticoin to be classified as commodities in the US and currency/utility token in EU.

Energeticoin will further improve the staking protocol to solve two known problems of Chia staking forks, i.e., instability and inefficiency. Chia staking forks often stall when double-

blocks are found to make the second block have uncertain difficulty requirement. Energeticoin will solve this problem by determining the difficulty based on blocks excluding the most recent blocks. Furthermore, inefficiency will be solved by the usage of an account-based model in Radix so that coins with the same address will be automatically combined to substantially reduce the verification time for blocks farmed by big farmers.

Chia's initial PoST was run efficiently. However, after about two years, people have found ways to exploit one design flaw to use significant amounts of computation on GPU to fake disk space (called "compression" in the community), making PoST very similar to conventional proof of work (PoW) that burns a lot of electricity. This severely damaged the green narrative and decentralization of Chia, and added to the operational costs of farmers that provide the disk space with files called "plots", and led to high selling pressures from farmers to cover such costs. The Chia team are proposing a new plot format to require saving some specific data before downstream processing to diminish the potential for faking disk space by computation. Unfortunately, their new plot format is not optimally designed. It adds costs to farmers but still leaves room for further compression by computation and only a small amount of critical information is necessary to save to significantly reduce the costs for computational attack on rented high-end GPU clusters. Foreseeing the unlimited potential for compression by computation that would kill the green narrative of Chia, I began developing a new plot format a year before the Chia team announced their own plan. I have designed a plot format that is as cheap to run for farmers as the original PoST and is economically secure against any degree of compression by computation. A better PoST format will not be the selling point of Energeticoin. However, to avoid free riding (of the Chia team without setting up a proper mechanism for rewarding community contributions) that is not good for the long-term prosperity of the community and would divert some attention away from Energeticoin, my new plot format will be initially provided as closed source software and be later open source after the new plot format from the Chia team has been implemented or if they do it over and come up with something similarly good.

To facilitate Energeticoin business model, smart contracts will be built to enable the trustable flow of capital without relying on trusting any third party. The first smart contract to build will be used in the reward-distribution for innovative product purchase and for referral incentives. Traditionally, multi-level marketing is organized centrally with rewards handled by a central party that could easily perform non-transparent illegal activities. This has the additional disadvantage that participants doing marketing have no guarantee to secure their future income and every reward arrangement is subjected to change or even cancel, making them less incentivized to make the marketing efforts and maintain customer relationships. Energeticoin will instead build the referral incentive system into the reward system for the purchases of innovative products. Specifically, the rewards sent to Buyers will be sent to a smart contract

address that will automatically send a proportion of received coins to the reward-receiving address of the referrer during fund withdraw. This makes sure that the reward arrangement is as long as Energeticoin is still operating.

The usage of Scripto for smart contracts likely also creates the possibility to allow decentralized pools for farmers to not only gain smoother payouts, but also to run sidechains to increase the transaction throughput of the network, which could be important when Energeticoin becomes widely used. A sidechain can use shorter block time to allow faster and cheaper transactions for low-value transactions and allow participation of geographically local farmers that may also have favorable local legal regulations to provide additional security. A sidechain can easily read and verify data from the mainchain, while the mainchain smart contract can efficiently verify the balance of a user on a sidechain to allow secure cross-chain transfer of funds through Merkle proof combined with BLS cryptography to aggregate signatures for efficiency.

3. Peripheral structures supporting Energeticoin

To build the Energeticoin infrastructure and successfully implement PoIP, several regulated entities need to be established in Western jurisdictions to play different required roles, which also helps to gradually transform the governance of the Energeticoin ecosystem into a form of more decentralized governance that is essential for its long-term success. These entities include Energeticoin Blockchain that builds the software for the ecosystem, Energeticoin Maker that provides token liquidity to the secondary market and promotes price stability, Energeticoin Store that deals with marketing, and Energeticoin Nonprofit that holds the ENGC tokens for PoIP and implements PoIP.

3.1. Energeticoin Blockchain

This company holds the ENGC tokens directly benefiting the software developers and early investors. It plays three roles:

Role 1: organizes developers from both the company and the community to build all software for all the entities required for the Energeticoin ecosystem to function.

Role 2: provides ENGC tokens for innovative product purchases and provides funds for Energeticoin Maker.

Role 3: donates funds to Energeticoin Nonprofit to maintain its operation, and holds and distributes ENGC allocated to industry Experts working for Energeticoin Nonprofit.

3.2.Energeticoin Maker

This company receives funds from Energeticoin Blockchain to use a semi-deterministic strategy to provide liquidity for the market, stabilize token price, avoid insider trading, and pay the profit back to Energeticoin Blockchain to provide a mechanism for it to consistently receive income without dumping their ENGC tokens.

3.3.Energeticoin Store

This company connects to the innovative industries and promotes the adoption of Energeticoin. It kickstarts the Energeticoin business model by importing and selling solar panels to Buyers by using ENGC as part of the payment (coupon). It will also build a market place for innovative products and accepts ENGC for part of the payments.

3.4.Energeticoin Nonprofit

This nonprofit organization holds the ENGC tokens for PoIP and distributes the tokens to Buyers and referrers. It maintains a website in collaboration with Energeticoin Store for the registration of Buyers and referrers. It implements the verification for Buyer claims for PoIP. It also sets the standards and competitivenesses for innovative products competing in PoIP farming of ENGC tokens based on open and publicly acceptable criteria established by world-renowned industry Experts and voted by the community holding ENGC to help the growth of truly promising innovative companies in the Energeticoin ecosystem. Proposals for decisions from industry Experts should work through an open peer review process well established in the scientific community.

4. Energeticoin tokenomics

4.1.Overall allocation

The total supply of ENGC will remain uncapped to prevent rewards for future participants from becoming too low and to enhance security, but the eventual annual inflation rate will be below 2% and decrease over time. The total supply in the first 30 years, which might be close to the *de facto* total supply given some coins might be permanently locked up, burnt, or lost, will be about 40 billion ENGC and initially allocated as follows:

Role	Total	Percentage	Restriction
Energeticoin Blockchain	16B	40%	Only provided to Buyers for purchasing products and possibly to Maker, together with most raised funds, to provide liquidity and promote price stability
Energeticoin Maker	0	0%	Receive funds from Energeticoin Blockchain to provide market liquidity and promote price stability
Farmers	8B	20%	Staking ENGC helps winning block rewards
Industry Experts	2B	5%	With a period of lockup
Buyers & referrers	14B	35%	With a period of lockup

Importantly, diverse mechanisms will be implemented to minimize the ENGC dumped on the open market to stabilize price.

4.2.Allocation to Energeticoin Blockchain

Energeticoin Blockchain, owned by developers, will receive 20% of the total ENGC supply as a prefarm in the genesis block, with an additional 20% gradually released alongside farmer rewards and other allocations.

It is important to point out that the company requires diverse contributors from the community. To achieve this, 16 billions of a different token will be issued to represent the equity of the company. Initially, Dr. Jiang-Nan Yang, the founder, will own 40%. Another 35% will be gradually allocated to community developers based on their contributions, and 25% will be used to set up an open contribution fund to benefit future contributors with novel and significant contributions. For the open contribution fund, any fund receiver will have a total reward capped at 1/4 of the remaining fund and cannot be anyone with himself/herself or his/her relatives or sexual partners benefiting from any Energeticoin entity to avoid corruption. The quantity of any reward from the fund should be voted by the community. During fundraising, the equity will be equally diluted. The benefit from un-allocated equities will be donated to Energeticoin Nonprofit to be decided by the community.

The company will raise funds with company equity from EI who must be qualified as accredited investors to avoid any chance of violating securities laws. The ENGC entitled to EI will not be transferred to their own wallets, but will instead be managed together with other ENGC held by Energeticoin Blockchain. Five rounds of fundraising are currently planned. For each round of fundraising, multiple funding sources should be sought to increase decentralization, and a proportion of the raised funds will be transferred to Energeticoin Maker to

provide liquidity to the market. This proportion will be lower at the beginning due to essential expenses to run the company. For each round, the proportion is planned to be as follows:

Seed round funding:	40%
Series A funding:	50%
Series B funding:	60%
Series C funding:	70%
Initial public offering (IPO):	80%

The other way for the company to receive fiat money is to sell ENGC when Buyers purchase innovative products. However, it is very important to make sure that this process does not make ENGC securities, which is determined by the Howey Test, i.e., *investment of money in a common enterprise with a reasonable expectation of profits to be derived primarily from the managerial or entrepreneurial efforts of identifiable third parties*. To avoid being classified as securities, money of Buyers will be transferred to Energeticoin Store or any entity following the standards set by Energeticoin Nonprofit as the price of innovative products. Additionally, any ENGC sold will not be directly transferred to Buyers, but instead transferred to Suppliers of these products to effectively function as a coupon. Buyers are allowed to directly buy ENGC from the open market and transfer to Suppliers to create demand for circulating ENGC.

Such an arrangement should avoid ENGC being classified as securities in several ways. First, it is a purchase of products (which is genuinely at the market price) instead of investment of money for Buyers. Suppliers sell at a discounted fiat price for a unit of products and are compensated with ENGC, but never actually invest money. Second, the money is not directly paid to Energeticoin Blockchain as the common enterprise. Buyers interact with Energeticoin Store to buy innovative products. It is Energeticoin Store that makes deals with Suppliers regarding to the settlements of payments partly through ENGC that is from either Buyers or Energeticoin Blockchain. Suppliers accept this arrangement simply to increase sales from more buyers. Third, even though Buyers will eventually be rewarded with ENGC for the purchase of innovative products, there should not necessarily be an expectation of profit other than offsetting some of the costs for purchasing innovative products. Fourth, Energeticoin Maker is created to stabilize ENGC price or at least reduce price changes, so both Buyers and Suppliers should not expect ENGC price to greatly rise compared to other cryptocurrencies. Instead, they are more encouraged to consider paying money and holding ENGC as a way to support innovation and enjoy certain rights in the ecosystem such as discounts and voting for community decisions. Finally, Energeticoin ecosystem is designed to be as decentralized as possible. Its success should be expected to come from market participation and diverse efforts of community contributors, instead of the managerial or entrepreneurial efforts of any entity in the ecosystem. So, the ENGC sold should remain a commodity.

Importantly, for the money from the sales of ENGC, 70% will also be provided to Energeticoin Maker to provide market liquidity.

4.3.Role of Energeticoin Maker

Energeticoin Blockchain and Energeticoin Maker will enter a contractual relationship in which the former transfers fiat (or stablecoin) funds or equivalents such as treasury bonds and gold-backed crypto assets, to the later who uses a fixed proportion allocation to provide liquidity for the market and make a profit, and the later can keep only 10% of the profit for itself as the management fee, and only the stable asset part of the profit can be withdrew by either party and the corresponding ENGC part will be burnt to maintain long-term stability of the ecosystem. It is possible that the former will not withdraw all the profit but instead reinvest the profit into the fixed proportion allocation. Then the corresponding ENGC part not withdrew will also remain in the allocation.

How can the Maker company always generate a profit? This lies in the very nature of the fixed proportion allocation trading.

According to Kelly's criterion, this fixed proportion r of ENGC allocation will be chosen to be 0.5 to maximize profit (and liquidity as well), i.e., the Maker will always attempt to balance its position to half fiat money (or equivalent) and half ENGC. When Maker receives fiat funds, it will use half to purchase ENGC from the market to achieve this proportion. To keep this proportion, it has to buy when price drops, and sell when price increases, by an amount determined by the fixed proportion. This not only provides liquidity and stabilizes the market, but also provides some protections for investors by reducing market overheating and impeding the market crash, which may diminish the speculative usage of ENGC due to its improved price stability compared to many other cryptocurrencies. However, it is not the Maker company's obligation or capability to guarantee price increase or to prevent price from dropping.

The fixed proportion allocation has the following mathematical property. If price change is continuous and the Maker places an infinite number of orders to always keep the proportion r , then some simple calculus ($dV = rV/p dp$) can show that the total value V of the assets at any time is only determined by the price p at that time by equation

$$V = V_0 (p / p_0)^r,$$

where V_0 is the initial total value and p_0 is the initial price, ignoring trading fees. So, if price returns to the initial price, then the total value V will also return to the initial total value V_0 , with no profit and no loss, no matter what happens in-between. However, in reality, price change is not continuous and the Maker can only place a limited number of orders. So, it will always buy at a lower price and sell at a higher price than the above model, and therefore always generate a profit. The value V from the above model will be kept in the allocation and the excess will be

defined as the profit throughout this document. So, the profit is price-adjusted and not directly calculated from the fiat value of the assets, and profit is still possible even if the total value measured in fiat drops. The Maker is allowed to use technical analysis parameters (derived only from public trading data) to determine when to place orders to increase profit, but must use medium (every few hours) or preferably high (every few minutes or even seconds) frequency of trading to both provide liquidity and avoid suspicion of insider trading and market manipulation (because humans normally operate on a much larger time scale). Additionally, the very nature of the allocation prevents it from buying on good news and selling on bad news because it can only passively perform trading by the opposite price action.

Another important mathematical property of the allocation is that there is a floor that the market price is unlikely to stably stay below (but short-term crash due to liquidity problem will always be possible). If we denote K_0 as the tokens already put into the allocation ($V_0 = K_0 p_0 / r$), the price p and tokens K in the allocation can be shown have the following relationship in a worst-case no-profit scenario:

$$p / p_0 = (K_0 / K)^{1/(1-r)}.$$

When $r = 0.5$ and K becomes the total supply S (i.e., all coins in the market have been sold into the allocation), the price floor p_{\min} can be calculated as

$$p_{\min} / p_0 = (K_0 / S)^2.$$

For example, if 30% (or 20%) of all coins has been already put into the allocation, then the price is unlikely to stay below 9% (or 4%) of the current price even in the worse-case scenario when no body still believes in the project and people all dump their coins, as long as the Maker is still operating under its defined rules and the used stable coins remain stable. If people will not all dump their tokens or more people follow the same allocation strategy, then p_{\min} will increase quadratically. This is in strong contrast to most other cryptocurrencies that could easily drop hundreds of times or even more in price.

Because of the guaranteed profitability (though not too high depending on the activity and volatility of the market) of the fixed proportion allocation, the Energeticoin community can be assured that the developers will not run away with the money raised to let the project die, and that Energeticoin will not be a VC-backed pump-and-dump cryptocurrency like many others. Instead, the Dev and EI have their interests highly aligned with the community on the success of the project in the long run. If they ever want to cash out, they can only do it through selling company equities rather than dumping ENGC.

The operations of Maker may largely be done through a liquidity pool smart contract or decentralized exchanges if regulated stable coins could be implemented on the Energeticoin network to further increase faithful reliability and transparency of operation.

4.4.Allocation to farmers

Farmers secure the blockchain by using both hard drives and staked ENGC as voting power to reach global consensus on transaction histories, and they receive block rewards in return. In contrast to the emission schedules of Chia and Bitcoin which halves every three or four years and causes a boom and bust cycle every halving period, Energeticoin chooses a gradual emission schedule to reduce price volatility and the speculative nature of ENGC. Block rewards will be readjusted very epoch of PoST, which is about 32 blocks in 10 minutes, according to the following formula:

$$\text{Block reward} = 2000 / (4 + t) \text{ if } t < 16 \text{ else } 100,$$

where t is time in year relative to the start of the blockchain. The cumulative Farmer emission at time t is

$$F(t) = 3366144000 \log(1 + t/4) \text{ if } t \leq 16 \text{ else } F(16) + 168307200(t - 16).$$

4.5.Allocation to industry Experts, Buyers and referrers

For the block rewards earned by farmers, triple the amount will be transferred to a smart contract that pays a third to an address for Energeticoin Blockchain, 1/12 to an address for industry Experts, and 7/12 to an address for PoIP of Buyers and referrers. To ensure fair governance and prevent centralization of decision-making power, the allocation of rewards to industry Experts must be co-approved by Energeticoin Blockchain through a smart contract, ensuring a balance of authority between the Energeticoin Blockchain and the industry Experts.

When a buyer purchases innovative products, he/she registers with Energeticoin Store and Nonprofit, in compliance with AML/KYC regulations, to provide his/her personal receiving address (PRA) and the identity of the referrer. Each registered buyer will receive three reward-receiving contract addresses (RRCAs) to manage different levels of referrals efficiently:

Level-0 RRCA: pays 75% to his/her PRA and 25% to the Level-1 RRCA of the referrer.

Level-1 RRCA: pays 75% to his/her PRA and 25% to the Level-2 RRCA of the referrer.

Level-2 RRCA: pays 75% to his/her PRA and 25% to the address of Energeticoin Store.

This design keeps the smart contract simple and reduces gas costs, ensuring scalability while preserving transparency and fairness. For buyers without a specified referrer, all three RRCAs will default to Energeticoin Store as the referrer. Referrer rewards are distributed only when the buyer makes purchases through PoIP.

To prevent sham registrations to exploit the rewards system, a referrer must either have already made purchases or be verified as having marketing ability (such as being a social media influencer). A buyer cannot be his/her own referrer.

To improve decentralization while avoiding structural conflicts, other stores are allowed to implement PoIP if they list the Energeticoin Store as the direct referrer for all their three

RRCAs and allocate 10% non-voting shares to Energeticoin Store. These non-voting shares are designed solely to ensure ecosystem cohesion and do not grant control.

The referral system is structured to comply with regulatory frameworks by ensuring that all rewards are linked to actual economic activity—specifically, the purchase of innovative products—and not recruitment efforts.

The multi-level referral cap (limited to two levels plus Energeticoin Store) helps mitigate risks of the system being classified as a pyramid scheme under various jurisdictions. The diminishing nature of rewards at higher levels further strengthens this compliance. In jurisdictions where any form of multi-level referrals is restricted, an alternative structure will be implemented, limiting rewards to first-level referrers only.

This system promotes the adoption of innovative products by creating clear incentives for referrals while minimizing legal risks. By focusing on product-based rewards and implementing technical solutions to cap referral levels, the system remains efficient, decentralized, and compliant with global regulations.

4.6.The economy of Energeticoin Store

Energeticoin Store does not directly participate in the allocation of ENGC. It generates its profit primarily by two means. First, it is the root referrer for all Buyers and therefore receives referrer rewards or dividends from other Energeticoin-compliant stores. Second, it charges a small fee for all transactions made through it and is therefore able to generate fiat revenue by itself.

4.7.Inflation analysis

The total supply at time t can be calculated as

$$\text{Supply}(t) = 8\text{Billion} + 4 F(t).$$

The annual inflation rate in the first 30 years is shown in the following table:

Year	Total supply	Annual inflation rate
0	8.0B	-
1	11.0B	-
2	13.5B	22.31%
3	15.5B	15.42%
4	17.3B	11.57%
5	18.9B	9.15%
6	20.3B	7.50%

7	21.6B	6.31%
8	22.8B	5.42%
9	23.9B	4.73%
10	24.9B	4.18%
11	25.8B	3.74%
12	26.7B	3.37%
14	28.3B	2.80%
16	29.7B	2.38%
20	32.4B	2.12%
23	34.4B	2.00%
30	39.1B	1.75%
31	39.8B	1.72%
32	40.4B	1.69%

Energeticoin Blockchain receives a prefarm of 8 billion ENGC for operational flexibility, and its other ENGC is gradually released to it together with farmer rewards to enforce better disciplines. Similarly, the allocation to industry Experts and Buyers is also gradually released.

It is important to point out that although there will be high inflation rate in the first few years, the adoption of Energeticoin should also be in the phase of exponential growth during the time. Given the fact that the renewable energy industry itself has an annual growth rate 8.5%, the inflation rate of ENGC can be reasonably assumed to be below the growth rate of its demand. Additionally, the Energeticoin Maker may also remove a large amount of ENGC from circulation in the early years to achieve a half position in ENGC after receiving a proportion of funds raised by Energeticoin Blockchain. However, it is impossible to precisely predict the market dynamics. So, risks from high inflation should still be considered for investors.

4.8. Market analysis

Market analysis in disruptive and innovative industries is inherently inaccurate. Let us take the current renewable energy industry as an example. The industry already has a market size of \$1 trillion and is expected to double in about 10 years. If we can reach a market penetration of 10% and 10% of price is paid in ENGC, then the annual purchase of ENGC from renewable energy products alone is above \$10 billion. Additionally, investors may purchase many times (say 10) of that, resulting in an annual net purchase of ENGC on scale of \$100 billion. If we assume this happens at a time when 10% of total ENGC is available for purchase on the market,

then the market capitalization of ENGC can be about \$1 trillion and the value of fiat money and ENGC owned by Energeticoin Blockchain can be about \$400 Billion plus the P/E ratio valuation from the guaranteed profitability of the fixed proportion allocation. Of course, this is a very rough and optimistic estimation and the future capitalization of ENGC is highly uncertain. But the calculation logic nevertheless shows the potential of ENGC if the adoption goals can be even just partly achieved through the consensus of the industry and the community around Energeticoin.

5. Game theory analysis of diverse participants

5.1. Overview

First of all, it must be stressed that human behaviors are not purely driven by selfish motives. Many times, selfless moral consideration for the common good weights a lot during decision making. In the renewable energy industry, moral considerations for humanity's long-term prosperity play a crucial role in driving development. Such moral consideration is also important for the Energeticoin community to reach consensus on the value of the project and therefore hold the ENGC tokens for the long term.

However, it must also be stressed that projects with moral consideration alone often face disastrous failures and any important project must have the strength against selfish attacks and closely align with people's selfish interests. In this section, we are going to use game theory analysis that considers only the selfish side of human nature to see how diverse participants will act to influence the outcome of the project, especially the long-term price of ENGC that indicates the value flowing into the ecosystem to promote the development of innovative industries.

An important concept to understand how the different percentages in the tokenomics are chosen is the marginal impact of a change for each participant/objective, which often results in an optimal percentage close to 50% for a two-player cooperative game. For example, it is tempting for the Developers (Dev) to take the majority, say 90%, of the ENGC token. However, this is only a $(90\% - 50\%) / 50\% = 80\%$ increase for Dev, but would result in others getting a 5-times reduction in the ENGC received. Since others play essential roles in supporting the project and therefore sustaining the value of ENGC, a 5-times reduction for their tokens may easily result in a 5-times, if not more, reduction in ENGC price. So, Dev would actually suffer an economical loss for taking more ENGC tokens. Therefore, it is important to avoid any important role getting an allocation close to 0%, otherwise its players will be severely demoralized, causing a severe loss for the project.

5.2.The Interests of Developers

The Energeticoin project requires the long-term active participation of Dev. It is important to align their interests to the long-term success of the project. By allocating 40% of total ENGC supply to Energeticoin Blockchain, the Dev are maximally incentivized to work hard towards the success of the project.

By requiring most of this asset to be eventually locked into a fixed proportion allocation managed by Energeticoin Maker, the Dev are cut out of the option of exit with short-term gain by dumping ENGC. Instead, their best interest can only be achieved through the continuous market activity and price increase of ENGC, which can only be achieved by the long-term success of the project.

5.3.The interests of Early Investors (EI)

The EI should be considered as rational investors who want to make the highest profit in the shortest time possible. We can only trust in their interests in the long-term success of the project to the extent that they would like many people to believe so to enable them to sell at a high price during exit. However, their investment in the project is crucial for the creation and initial running of the project. By incorporating them into Energeticoin Blockchain as a conventional corporate structure, they are given the option of a quick exit by selling equities without negatively affecting the long-term success of the project by dumping ENGC.

More importantly, by putting most of their investment into the fixed proportion allocation with guaranteed profitability and a ENGC price floor p_{\min} for a given total supply of ENGC and a given amount of fund invested in the allocation, the project is turned from a high-risk project like most startups into a low-risk project from a venture capital perspective. Based on Kelly's criterion for asset allocation, for a project with limited risks and almost unlimited growth potential, it is in the best interest for the EI to invest a much larger proportion of money into the project compared to most other startups that could easily have a 100% loss of investments. Additionally, the more investment they put in, the more money will be available to support the price of ENGC and therefore result in a higher valuation of the ENGC held by Energeticoin Blockchain and more profitability for their investment. This further reinforces their interest to put in a higher allocation of investment into the project to boost its long-term success.

It is important to stress that the discussion in this section is high speculative and intended *only* for accredited investors that can independently assess the assumptions that may fail and various risks involved. Nothing here can be considered as solicitation for investment from the general public who should skip this section.

If we assume that there is a certain amount of ENGC that will be bought by Energeticoin Maker from the funds raised from EI, then the money EI invested in should naturally be

proportional to the price of ENGC, and therefore to the total value the Energeticoin Blockchain whose primary asset is the 40% of the total ENGC supply.

However, this assumption likely underestimates the price increase of ENGC caused by increased investment for several reasons. First, the primary net sellers of ENGC in the open market are most likely those who rely on it for a living, such as farmers and dedicated promoters, to cover their operational/living expenses. So, when price increases, they are likely to sell less ENGC to cash out the same amount of fiat money to cover their expenses. Second, if we assume that the fair price of ENGC is proportional to p_{\min} to reflect a constant human nature in the tradeoff between risk aversion and greed under a specific economical circumstance, then p_{\min} is proportional to the current price according to equation $p_{\min} / p_0 = (K_0/S)^2$, in which p_0 and K_0 can be interpreted as the current price of ENGC and the amount of ENGC in the allocation, respectively. When new large investment comes in, the market will likely act in advance to push the price so high that the Maker will have equal value of stable coins and ENGC without actually buying much ENGC (given the fact that normally only a small amount of ENGC is available for purchase on the market most of the time). However, for any ENGC the Maker is able to buy, this equation indicates that it will quadratically increase the p_{\min} / p_0 ratio. Third, by investing more money in, more people will believe in the seriousness of the project and more resources will be available to develop the project, making people willing to hold ENGC for the long term and therefore reducing the selling pressure of ENGC which would quadratically increase p_{\min} .

Another important factor to consider is that Energeticoin Blockchain will gradually sell its ENGC to facilitate Buyers for purchasing renewable energy products. A low price of ENGC would result in the ENGC held by Energeticoin being quickly exhausted. This decreases the value of the company and therefore is against the interests of EI.

On the other hand, it is also against the interests of EI if they invest too much money into the project to make the ENGC price so high that future growth is unlikely, because then even a small proportion of ENGC sold would exhaust all the cash flowing into the market. More specifically, assume that a total fund S_i is raised during Serial i fundraising by giving EI a proportion w_i of the company equity, a proportion of c_i is allocated to the fixed proportion allocation, and $c_i/2$ is used to buy a proportion u_i of the total ENGC supply from the market. Then the market cap of ENGC can be estimated as $S_i c_i / 2 / u_i$. Since the company holds 40% of the total supply and w_i of it belongs to these EI, the valuation E_i of their ENGC can be calculated as $E_i = 40\% w_i S_i c_i / 2 / u_i$. Then the fold of profit for the EI (ignoring assets other than the prefarm ENGC) can be calculated as $E_i / S_i = 0.2 w_i c_i / u_i$. For the Seed round funding ($i = 0$), $w_i \approx 0.16$ (explained later), $c_i = 0.4$. If we assume 20% of the total supply will be in circulation and 10% of it will ever be sold before the next fundraising and Energeticoin Maker is able to buy 10% of the ENGC sold (assuming a healthy business development and other investors being confident enough to buy the majority), then $u_i = 20\% * 10\% * 10\% = 0.002$. So, $E_0 / S_0 = 0.2 * 0.16 * 0.4 /$

0.002 = 6.4. For later rounds of fundraising, more ENGC will be available for sale, however, c_i will also be larger by design and likely more money from the renewable energy business will come to purchase ENGC due to business growth. For simplicity and conservativeness, we may assume an approximate 5 folds profit for each fundraising ($E_i/S_i = 5$). If after each round of fundraising previous rounds will have the same proportion of equity, then the fund raised for each round should equal to the valuation of the shares given to EI of the previous round, i.e., $E_i = 5S_i = 5E_{i-1} = 5^{i+1}S_0$. If we assume a \$400 Billion valuation of the company (ignoring all other assets except the prefarmed ENGC) after IPO and a 10% shares for each round of EI, then the optimal Seed round funding S_0 can be estimated as $\$400 \text{ Billion} * 10\% / 5^5 = \$12,800,000$. The Seed round funding should be even larger if we assume that later rounds of funding would boost the price less due to the larger scales. For example, if each round has an average appreciation of 3.3 instead of 5, then optimal Seed round funding is close to \$100 million. Additionally, the initial fundraising should be more important for the establishment and success for the project, and determines the initial company valuation and therefore the scales of later rounds of fundraising.

Note that investor funds will partly be used to purchase ENGC to provide liquidity and maintain long-term price stability, which will benefit the whole community. To avoid this being considered market manipulation, such purchase will be done gradually automatically and long before the next fundraising to allow time for the market to discover the true price of ENGC. Alternatively, especially just before IPO that involves non-accredited investors, instead of purchasing from the open market, the ENGC held by Energeticoin Blockchain could be paired with the fund to directly transfer to Maker for providing liquidity programmatically.

If we assume that the final valuation of the company is proportional to the product of the final percentage equity shares of EI for all the five rounds of fundraising and these shares sum up to a certain percentage, say 49% (to allow the majority share of the developers to increase market confidence for the long-term development of the project), then the final valuation is maximized when each round has the same share (9.8%) according to the arithmetic-geometric mean inequality. Considering percentage share dilution after each round of fundraising, the percentage share for EI for each round at the time of fundraising should be: Seed round, 16.2%; Series A, 13.9%; Series B, 12.2%; Series C, 10.9%; IPO, 9.8%.

Alternatively, the Seed round fundraising may be partly done through initial coin offering (ICO) in European Union under the new MiCA regulation. This has the advantage that only the submission of a formal white paper (without pre-approval and a corporate structure) is necessary for regulatory purposes and using ICO to fund project development is legal under MiCA. ICO also increases the decentralization of the project and reduces the influence of VC investors. The disadvantage is that more ENGC will flow into the open market and increase sell pressure, and reduce the fund transferred to Energeticoin Maker for price stability. To mitigate the disadvantage, early ICO investors above some minimal investment may later be allowed to

redeem the ICO coins for company shares, but this obviously cannot be guaranteed due to regulatory uncertainties.

5.4.The interests of Suppliers

The acceptance of Suppliers to receive payment partly through ENGC is crucial for the success of the Energeticoin ecosystem. Two important questions to ask are why would they accept such arrangement at all and why they wouldn't create a similar cryptocurrency themselves.

For the first question, the Suppliers accept ENGC as part of the payment for their own benefit. Cryptocurrencies themselves have accepted values in the market and people are willing to invest a large amount of capital for mining cryptocurrencies that may even have no real-world business at all. It would be even more appealing to them if they can mine the cryptocurrency ENGC as a byproduct of buying innovative products instead of burning resources as in other cryptocurrencies. Even people uninterested in cryptocurrencies can benefit by purchasing through the Energeticoin ecosystem because it can use ENGC to partly finance the purchase and reduce the price (a buyer can ask the community to pay the ENGC part by forgoing the ENGC reward that will be received in the future). Therefore, the Energeticoin community will be a large set of consumers for the Suppliers and will have a collective bargaining power to push the adoption of ENGC. Since we only ask the Suppliers to allow part of the profit to be paid in ENGC, the Suppliers would still make an immediate fiat profit and may even make more profit by selling more products since our reduced prices or ENGC rewards would make previous uneconomical investments become economical. A supplier would be even more competitive and profitable if its upstream suppliers can also accept ENGC as part of the payment, making a much larger proportion of the price payable by ENGC and therefore resulting in a much lower price in fiat.

Additionally, by accepting and holding ENGC, each supplier is hedging against its own business risks and can benefit from the growth of the whole industry regardless of its own business performance. This is an important factor because innovative industries are often highly competitive and disruptive and even the current most promising company can become irrelevant in the future. Holding ENGC also gives Suppliers the voting power to decide important matters in the Energeticoin community, such as deciding which groups of innovative products will be eligible for winning ENGC rewards.

For the second question, there are several reasons that discourage Suppliers to issue their own cryptocurrencies similar to ENGC.

First, the major advantage of ENGC is to bring more capital from Buyers by giving them benefits of discounts and voting rights. However, suppliers generally do not directly deal with consumers. For a globalized industry, Suppliers and their Buyers often do not reside in the same

jurisdiction and directly selling products to Buyers will be both difficult and inefficient. The Suppliers would likely not have the expertise for marketing and cryptocurrencies, so allocating resources into these areas may even harm their core businesses. These problems will be even more prominent for upstream Suppliers.

Second, the gain of issuing their own cryptocurrencies may not be significant enough for Suppliers. Although Energeticoin Blockchain initially holds 40% of the total ENGC supply, which seems a lot on the surface, the majority of its value will be put into a fixed proportion allocation that stabilizes prices and is beneficial for most participants but has no large immediate benefit for the company itself. However, it makes little financial sense for a supplier company to lock up so much capital because the company requires a large amount of immediate capital for research and development to compete in the market. If it needs more capital, it is easier and safer for them to raise funds from the conventional capital market.

Third, a cryptocurrency issued by a supplier company will be less appealing to whoever holds it. Any supplier company will have a difficult time to convince a competitor company to accept its cryptocurrency and therefore the cryptocurrency would be far less inclusive than ENGC. Since any company specialized in certain areas may fail, it would be difficult for people to believe in its long-term prosperity. However, Energeticoin can function as a non-partial third party for the Suppliers and can easily sustain for a long time, unaffected by any Supplier company.

Fourth, a supplier issuing a similar cryptocurrency is in direct competition with Energeticoin and will likely lose Buyers from the Energeticoin community. Energeticoin may further give more support for a competitor of the supplier. Both scenarios are detrimental to the supplier who may be better off not issuing a competitor cryptocurrency in the first place.

Finally, for others similar to us to issue a competitor cryptocurrency, they will also have a difficult time to convince people to accept it due to several reasons. Most importantly, people appreciate originality and despise plagiarism in an innovative business. People would question their capability to build a successful project if they can only copy from others and would question their integrity to manage a large fund if they start by stealing ideas from others. The founder of Energeticoin has worked in biomedical science for more than a decade and scientists are known to be the most trusted profession. It is unlikely for a competitor cryptocurrency to have a scientist as the center of the development team, since a decent scientist does not plagiarize. People would be better off to invest in the established Energeticoin rather than investing in a copied cryptocurrency that will waste resources to re-invent the wheel and face competition from Energeticoin. Similarly, copies of Bitcoin generally have low market values.

To avoid some Suppliers immediately dumping their coins on the market that would be bad for the whole ecosystem, Suppliers will only be allowed by smart contract to take out a proportion, say 10%, every quarter of the year. If a supplier wants to pay its upstream Suppliers

with ENGCO, the smart contract should allow withdraw in advance under the approval of Energeticoin Store or Nonprofit who can automate this process by simply checking whether the recipients are also registered Suppliers.

5.5.The interests of Buyers

The whole design of Energeticoin is centered around benefiting Buyers, allowing them to additionally earn ENGCO when purchasing innovative products, which may significantly offset the costs for the purchase. So, it would be reasonable to assume the willingness of participation and cooperation from Buyers. Innovative products are generally expensive, so even a small discount in price or equivalent ENGCO compensation will be incentivizing enough for most Buyers to overcome some extra operational complexity for using ENGCO during the purchase.

Buyers will also be incentivized to introduce new Buyers through the multilevel marketing design enforced by Energeticoin smart contracts.

To avoid immediate dumping, ENGCO received by Buyers will be locked initially and then gradually unlocked. This also helps promoting more Buyers to hold ENGCO and interact with the community for a long period of time simply through habit.

5.6.The interests of industry Experts

The Experts working for Energeticoin Nonprofit play essential roles for making rules and decisions about which products and how much they can be rewarded in PoIP, therefore are prone to corruption campaigns from industries. Therefore, it is not only necessary to implement peer review mechanisms to reduce their abuse of power, but also necessary to allocate ENGCO to them to make them long-term holders of ENGCO so that their interests can be closely aligned with the long-term prosperity of the Energeticoin ecosystem. For each Expert, his/her work will be gradually rewarded, so it will also be his/her best interest not to ruin his/her reputation and future rewards by corruption.

5.7.The interests of ENGCO investors

ENGCO investors play an essential role for sustaining the price of ENGCO by bringing in capital, and therefore promote the prosperity of the Energeticoin ecosystem. Without them, the value of ENGCO will be limited and the business model of Energeticoin may not be viable at all due to the lack of demand for ENGCO. They also act as a buffer to dampen the price impact of large traders, provide liquidity to the market, and therefore provide price stability and allow even larger investors into the market.

ENGCO investors are a diverse group of participants who buy ENGCO for many different reasons. The most important group of participants are the supporters of innovation and the Energeticoin project. They tend to hold ENGCO for the long run despite other investment

opportunities and to drive the community growth. To keep these participants in the community, Energeticoin simply need to keep its promise and really strive to facilitate innovations that benefit a broad range of humanity. To achieve this, a key determinant for a product for PoIP is whether its company donates to upstream academic researches that is the source of innovations. To avoid corrupting academics, such researches should not assess or endorse the products.

The second group of participants buy ENGC for its functionality as a strong and secure cryptocurrency. They can use ENGC for store of value and international value transfer due to its price floor, high liquidity, and relative price stability compared to most other cryptocurrencies. They can also build complex and powerful business models based on the blockchain of Energeticoin.

The third group of participants buy ENGC for speculation and portfolio allocation. They are often professional traders who simply plan to buy low and sell high. They may sell out their holdings as soon as the price chart starts to turn weak in their personal perspectives. However, they as a group still can bring in a huge amount of capital and provide liquidity for the market. Having a price floor for ENGC to not stay below also benefits them.

5.8.The interests of centralized exchanges

The listing of ENGC on centralized exchanges helps bring more investors into the Energeticoin ecosystem, provide the community an easier way of trading, and possibly audit the behaviors of the Maker for faithful adherence to its defined trading rules. In return, Energeticoin provides the following advantages for centralized exchanges to list ENGC:

1. The Maker provides liquidity for the market and can increase trading volumes to bring more trading fees to the exchanges.
2. Energeticoin has real-world high-value applications, therefore may also bring new users with large capital to the exchanges.
3. ENGC has a price floor resulted from the fixed proportion allocation and has connections to innovative industries, therefore can help investors to diversify their risks from most other cryptocurrencies, making exchanges listing ENGC more attractive to investors than other exchanges.

To further strengthen the ties with centralized exchanges, during fundraising, Energeticoin will also intentionally seek investment from venture capital funds with close ties to large exchanges.

5.9.The interests of traditional financial institutions and governments

It is anticipated that most traditional financial institutions are anti-crypto because cryptocurrencies threaten the very existence of most of these institutions. However, they also seem to have realized the inevitability of cryptocurrencies and try to steer the development of

cryptocurrencies for their own advantages, such as pushing the proof-of-stake transition for Ethereum and other environmental, social, and governance (ESG) agendas. To minimize resistance from traditional financial institutions, Energeticoin takes a balanced approach; it adopts a highly decentralized blockchain implementation based on PoST to ensure people's financial freedom, and confirms to a high ESG standard to promote renewable energy (environmental), technological innovation and employment (social), and transparent organization (governance), to reduce the attacking surface from traditional financial institutions. Additionally, by promoting innovative industries through a conventional corporate structure, Energeticoin also enables the easy participation and profitability for traditional financial institutions, thereby gaining support from at least some of them.

It is well known that traditional financial institutions have strong lobbying power for governments. By confirming to a high ESG standard and allowing these institutions also to participate and profit, governments may also provide a more friendly regulatory environment for Energeticoin than most other cryptocurrencies, especially in the current economical and geopolitical environment where sanctions against Russia have led to a high energy price and severe inflation.

5.10. The interests of the Chinese government

The elephant in the room when discussing the renewable energy industry is the Chinese government, who almost controls the global solar energy industry and apparently does not like the domestic development of cryptocurrencies. Gaining support from the Chinese solar energy industry without objection or takeover from the Chinese government is greatly helpful, though not required, for the success of Energeticoin.

Ideally, the Chinese government would like to help its own solar energy industry and follow the rationale we have discussed for the interests of Suppliers. However, it may have a more aggressive nature. The primary defense of Energeticoin is that it is centered around the customer side of the industry. If a branch of the Chinese government or a government-owned enterprise tries to copy Energeticoin, it is unlikely to gain approval from Western governments due to monopoly and product-dumping concerns. Without funds from customers, the involvement of cryptocurrencies is unhelpful and fundraising would be much easier from the conventional financial market. Even if it gains domestic Chinese customers, the success of a cryptocurrency project requires the maturation of a broader cryptocurrency market for the inflow of capital, which China lacks. Additionally, government-managed enterprises are known to be full of inefficiencies and corruptions and lack of creativity; it will be difficult for them to create a commercially competitive cryptocurrency outside of its jurisdiction.

On the other hand, Energeticoin operates under Western regulations and has access to Western customers. By allowing the usage of ENGC, the Chinese government will be able to

enjoy a larger sales and forex income by its solar energy industry. Since the Chinese government only bans cryptocurrency broker services but acknowledges cryptocurrencies as legal virtual properties, it does not violate Chinese law for the solar energy industry to accept ENGC as a coupon token, especially from overseas. Additionally, Energeticoin allows Chinese investment as long as it does not violate Western regulations and good governance, making it easier for the Chinese government to invest in Energeticoin than to roll out its own cryptocurrency if it ever becomes interested in cryptocurrency that is beyond more sales of the solar energy industry.

5.11. The interests of the Founder

To create Energeticoin to reward Buyers of innovative products and increase the sales for Suppliers to promote innovation, centralized entities are unavoidable due to the requirement to interact with these real-world Buyers and Suppliers. As a consequence, a Founder is also required to set up and organize these entities. However, if the Founder has too much influence over these entities and takes the majority of the shares of these entities and ENGC, then decentralization will be severely harmed with little community participants, making ENGC more likely to be classified as a security. It is therefore paramount to clearly limit and specify the roles the Founder will play and the benefits the Founder will take out of the project, which should also minimize conflicts of interests and power struggle the Founder would face in the future.

Dr. Jiang-Nan Yang, the Founder of Energeticoin, will fully control Energeticoin Maker, which does not receive any ENGC allocations but will benefit from 10% of the profits generated by the 40% ENGC allocated to Energeticoin Blockchain. Dr. Yang will also initially fully control the Energeticoin Store (later recruiting more participants as in a traditional company), which earns a small proportion of referrer rewards and transaction fees. This gives the Founder a benefit without directly taking more shares from Energeticoin Blockchain and Nonprofit that would require more efforts and contributions from the community, therefore helps the future decentralization of the project.

For Energeticoin Blockchain, Dr. Yang will be a developer, coordinate other developers, and will take 40% of the initial shares of the company that has 40% of total ENGC supply. Dr. Yang's shares of the company will be eventually diluted to about 20% after fundraising.

For Energeticoin Nonprofit, Dr. Yang will be involved in setting up the rules of decision making and maintain a veto power to make sure that the Nonprofit is operating under the original vision, but will mostly rely on industry Experts to propose the best decisions for the community to vote on. Dr. Yang will not take any shares (including the ENGC allocation to industry Experts) in this nonprofit company.

Ultimately, Dr. Yang's benefits will equate to less than 15% of the total ENGC supply, aligning with typical founder compensation in a business. Additionally, these are benefits realized only in the long term without a quick exit.

Since eventual sufficient decentralization is important for the project to succeed, it will also be the best interests of Dr. Yang to gradually transfer most controls of the project to qualified community members and decentralized governance while only retaining veto power for changes to the structures and relationships of Energeticoin entities to protect the original vision. Decentralized governance and community voting for important decisions should be implemented as soon as possible.

6. About the Founder

I was born in 1986 and did my Bachelor degree in Nanjing University in China, with two years studying mathematics and three years biology. I made several theoretical evolutionary biology publications and am familiar with game theory, programming and modeling. I further did my Master degree in University of Rochester in USA and Doctorate degree in University of Jena and Leibniz Institute on Aging in Germany to do cross-species genomic big-data analysis and experiments in a big collaborative lab environment to identify genes related to animal aging to improve human health. I have been building an automated quantitative trading system for cryptocurrencies as a hobby ever since 2014, and been managing a farm for the cryptocurrency Chia and cryptocurrencies forked from it ever since 2021. I have also held a vice general manager position (although with no investment done due to the poor outlook of the macroeconomics) since early 2021 in a small Chinese investment company that has a child company selling solar panels. I consider blockchains and cryptocurrencies as a revolution for the society to be rebuilt on un-corruptible rigorous rule of law and am passionate about using blockchain technologies to revolutionize economic and social structures for the healthy development of humanity.

7. Disclaimers

This document provides a preliminary description of the design and planned business model of Energeticoin, based on my current understanding of relevant subjects, including applicable regulations, at the time of writing. However, no aspect of this document is guaranteed to occur as described, and I reserve the right to make modifications due to changing circumstances or enhanced knowledge. While Energeticoin Maker aims to stabilize ENGC's price, significant volatility remains inherent to cryptocurrencies. Additionally, Energeticoin Maker, as a centralized entity trading on external exchanges, is subject to risks such as hacking, human error, or technical issues that could lead to the loss of funds, failure in promoting price stability, or even threaten the viability of the entire project. This document does not constitute financial advice. There are numerous factors that could lead to the failure of the Energeticoin project and the loss of user or investor funds. Please consult a professional financial advisor to

assess the various risks before making any investment decisions, and ensure you do not allocate more to Energeticoin than you can afford to lose.

As the founder, I am only one individual, and the success of Energeticoin depends on collaborative efforts from a wide range of contributors and participants—including developers, experts, industries, consumers, and investors—who must agree on the vision of Energeticoin and drive its adoption. It is unreasonable to rely solely on me or the Energeticoin entities for its success. The project's success depends on decentralized participation and consensus, which may or may not occur.

This white paper adheres to MiCA's regulatory framework, particularly in sections related to utility tokens, transparency in token issuance, and compliance with EU consumer and financial law. ENGC is a utility token under MiCA designed for use within the Energeticoin ecosystem, primarily serving as a medium of exchange for purchasing innovative products. It allows buyers to obtain discounts and to engage in community governance by voting on key decisions, such as referral incentives and product eligibility for PoIP rewards. ENGC is not intended for speculative investment, and its value is derived from its utility within the ecosystem.

ENGc is not an investment product and there is no guarantee that it will appreciate in value. Energeticoin Maker implements a fixed proportion allocation that reduces the potential for price spikes and discourages speculative trading. The value of ENGC should be seen primarily as providing discounts on products, voting rights in community governance, and as a way to support innovation. Success relies on widespread participation and collaboration within the ecosystem, which is not guaranteed, and therefore the risk is high. ENGC should not be held with the expectation of profit.

ENGc tokens are subject to price volatility due to fluctuations in market demand, and are also exposed to technological risks that could arise from blockchain infrastructure failures, including cyber-attacks, smart contract bugs, or other technical issues. There is no assurance that ENGC will increase in value, and token holders should be aware that the token's value may decline over time.

ENGc holders will have the right to vote on important decisions affecting the Energeticoin ecosystem, such as products eligibility for PoIP rewards and adjustments to the referral structure. However, ENGC holders are not entitled to ownership rights in any of the entities related to Energeticoin, nor do they have claims to profits generated by these entities.

Finally, ENGC tokens do not represent equity or ownership stakes in Energeticoin Blockchain, Energeticoin Maker, or any other related entities. Token holders are not entitled to dividends, profit-sharing, or any other financial benefits beyond the utility of the token for transactions and governance within the ecosystem.

The Energeticoin ICO, if ever performed, will fully comply with AML/KYC regulations as required under MiCA. All participants in the ICO will be required to undergo identity

verification through a third-party KYC provider. This process includes verifying the participant's identity documents, proof of address, and ensuring that the funds used for token purchases are not associated with illicit activities. By participating in the ICO, buyers agree to provide accurate information for compliance with AML/KYC laws. Failure to provide such information may result in disqualification from participating in the ICO.