DECA Price Mechanism

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Abstract

A token that is a *commodity* and a *security* leads to a price mechanism model. By a historical and mathematical background that defines DECA token value, the semistable token tends to increase the percentages of the *commodity*, while the *security*, as a volatile asset, helps to fund DECA currency. The purpose leads to a fully *commodity* cryptocurrency and its platform.

Collaboration, decentralization and digital democracy.

1 Development of money

> *"We have gold because we cannot trust governments."*
> *President Herbert Hoover to Roosevelt in 1933.*

This paper aims to establish the theoretical background to determine a price mechanism for the DECA token, the first semi-stable coin based on carbon credits. The paper consists of four sections: First, the traditional money, such as commodity money, fiat money, and its characteristics will be defined. Second, the instruments to determine the fiat money supply price will be determined, and thirdly, the price determination of the DECA token, a semi-stable coin, is explained. The fourth section applies the theory established in the third section through data analytics.

IMPORTANT NOTE: This is only for educational purposes, we do not promote investment or that what we explain here is a pure fact.

1.1 Traditional Money

In literature, money is defined as an asset that people use to buy goods and services; it has three functions: A medium of exchange, a unit of account and a store of value.[1] There are different types of money such as commodity money, and fiat money. **Commodity money** is characterized by having an intrinsic value, which means that the money would have value even if it is not used as money. The most common commodity money examples are gold, silver, and oil. **Fiat money** has been established by a government decree and was introduced as an alternative to commodity money. Its main characteristic is that it has no intrinsic value, which means that without the government decree it would be worthless.[2] Fiat money is based on the credit of an economy and its value depends on supply and demand which depends on the economic, industrial, and monetary performance of a country and on how it is governed.[3]

Money has a long history, but China was the first country using fiat money around 1000 AD and people accepted it as they already were familiar with the use of credit notes. For Western Countries, it took them until the 18th century to use fiat money. They started using bills of credit to make payments like taxes. Some regions like New England and Carolina printed a lot of bills of credit which led to devaluation and a hike in commodity prices.[4] To understand the utility of fiat money, we have to analyze the reasons for its application:

[1] Mankiw, Ball (2010): Macroeconomics and the Financial System
[2] N. Gregory Mankiw, Economics, p. 607
[3] Mankiw, Ball (2010): Macroeconomics and the Financial System
[4] https://corporatefinanceinstitute.com/resources/knowledge/economics/fiat-money-currency/ 2019-05-21

1.1.1 Consumer-driven economic system

According to the OECD, the final consumer expenditure defined as household consumption to meet their everyday needs such as food, drinks, clothing, and housing, represents normally 60% of the GDP of a country.[5] Before the subprime crisis in 2008, the quarterly consumption expenditure accounted for 70%[6] of the US GDP and dropped steadily until reaching 67% in March 2020.[7] Consumer spending has become an important part of economic growth and it is mostly financed through debt.[8] The indicator household debt to GDP in the United States showed that it peaked in 2008 at 98% and dropped since then constantly until reaching 76% at the end of 2019.[9] The results show that most expenses are based on credit. One big advantage of fiat money is that governments can print more money and motivate people to spend more which can be traced back in history. For instance, the US monetary history started in 1792 fixing the dollar value to gold and silver. Due to the volatility in the global supply of both metals, the government adjusted the metal values.[10] In 1879, the US adopted the Gold Standard with the US dollar pegged to the gold value until 1933.[11] In 1913, the US Dollar was not backed up 100% by gold anymore as the Federal Reserve evolved the system from its founding year. The Federal Reserve backed the US dollar only by 40% with gold and was able to print more money.[12] By doing this, the US government could spend more money and was not so restricted to the availability of gold. Most countries left the Gold Standard during World War I to print more money and finance their participation in the war. The focus on the Gold Standard returned due to the Great Depression in 1929 and the second World War. By the 1950s, the international community decided to replace the Gold Standard and implement the Bretton Wood Agreement, where the USD was pegged to the gold and other currencies fixed their value to the USD. As the United States kept printing money to stimulate its economy, other countries became concerned about the purchasing power of the USD as the exchange rate to gold was fixed. Many countries attempted to exchange their USD against gold.[13] As a consequence, in 1971, President Nixon announced the end of the gold convertibility unilaterally and the "quasi Gold Standard" fearing a gold run on the United State and hence, devaluing the dollar more. Thus, the US government stopped issuing gold for foreign central banks in exchange for US

[5] https://data.oecd.org/hha/household-spending.htm 2019-05-21

[6] The Consumer-Driven Economy at a Crossroads ROBERT P. YEREXn, Business Economics

[7] https://www.ceicdata.com/en/indicator/united-states/private-consumption--of-nominal-gdp 2019-05-21

[8] The Consumer-Driven Economy at a Crossroads ROBERT P. YEREXn, Business Economics

[9] https://fred.stlouisfed.org/series/HDTGPDUSQ163N 2019-05-21

[10] https://corporatefinanceinstitute.com/resources/knowledge/economics/gold-standard/ 2019-05-21

[11] https://fas.org/sgp/crs/misc/R41887.pdf 2019-05-21

[12] https://corporatefinanceinstitute.com/resources/knowledge/economics/gold-standard/ 2019-05-21

[13] Central Banking Theory and Practice

dollars.[14] Since then, the dollar is based on full faith and credit, which means that the government promises to pay its debt in a timely manner.[15]

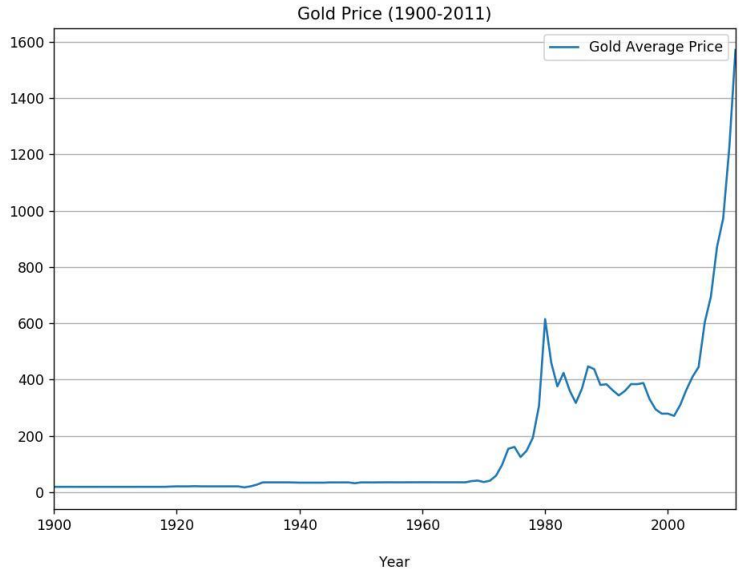

Image 1. Gold Average Price between 1900-2011. Source: Own Development, Data from World Gold Council, London PMI.

Image 1. exhibits the gold price evolution between 1900 and 2011. Up to 1971 the gold price per ounce has been flat, at 20.67 USD until 1933, and jumping in the same year to 35.00 USD as the dollar devalued due to the Great Depression. After the Second World War, the USD has been chosen to be the world reserve currency pegged at a gold price at 35.00 USD. Since decoupling the dollar from the gold, gold could fluctuate freely, and the price increased 24 times between 1971 and 1980. Until today, gold is used as a hedge against fiat money, which explains its strong increase over time.

1.1.2 Fiat Money facilitates usage

The second reason is that it is easier to use fiat currency. Using gold as currency is costly as it takes time to verify the purity and to measure the quantity. To make the usage easier, the government accepted gold from the public in exchange for gold certificates with the promise that they can redeem them against gold.

[14] https://www.intereconomics.eu/contents/year/2015/number/5/article/on-the-unilateral-introduction-of-gold-backed-currencies.html 2019-05-21

[15] https://www.intereconomics.eu/contents/year/2015/number/5/article/on-the-unilateral-introduction-of-gold-backed-currencies.html 2019-05-21 [15] https://www.investopedia.com/terms/f/full-faith-credit.asp 2019-05-21

As people believed this, the certificate was valued as gold itself. Within time, the redemption has been irrelevant as nobody redeemed the certificates for gold. As long as everybody accepts the paper in exchange for value, they will have value.[16]

Fiat money became quite popular in the 20th century as governments and banks protected their economy from the busts of the business cycle, where commodity currencies could not help. However, central banks have not been able to prevent a crisis (2008) through the use of fiat money, even if they control the money supply. Thus, there are a lot of critics who argue that gold is more stable due to its limited supply than fiat which has an unlimited supply.[17]History has proved that the control of money supply can lead to economic ruin. Countries like Germany in 1923, Zimbabwe in 2008, and Venezuela in 2019 got into hyperinflation due to printing money.[18]

1.2 Cryptocurrencies

In the history of money, commodity money can be considered as money 1.0, followed by fiat money (money 2.0). The deficits of the former money types led to the creation of cryptocurrencies, which we can define as money 3.0. The

first cryptocurrency was developed by Satoshi Nakamoto, who released Bitcoin in 2008. Nakamoto announced this invention as "Peer-to-Peer Electronic Cash System," which is completely decentralized and prevents double-spending. The development of a cryptocurrency, a digital medium of exchange, is the result of the "failures" and deficits of the traditional money mentioned before. It is based on asymmetric cryptography, which uses two different keys: the public and the private keys. [19]In contrary to fiat money, cryptocurrencies have a limited token supply and cannot be manipulated by authorities to create more tokens. Furthermore, it is not created by debt as fiat money. A central bank that is creating fiat money to the consumers, is simultaneously issuing a percentage of the consumers´ government debt. Cryptocurrencies do not represent debt, only itself.[20]In early March 2020, the governor-designate, Andrew Bailey, from the Bank of England, said that Bitcoin doesn't have any intrinsic value. Other governmental representatives, like the United States President, Donald Trump, confirmed the missing intrinsic value. However, crypto investors disagree as intrinsic value is a subjective perception of an investor and depends on the specific situation.[21] In comparing cryptocurrencies like Bitcoin with traditional money,

[16]Mankiw, Ball (2010): Macroeconomics and the Financial System

[17]https://corporatefinanceinstitute.com/resources/knowledge/economics/fiat-money-currency/ 2019-05-21

[18]Mankiw, Ball (2010): Macroeconomics and the Financial System

[19]https://blockgeeks.com/guides/what-is-cryptocurrency/#Understanding_Cryptocurrency_Basics_101 2019-05-21

[20]https://www.bitpanda.com/academy/en/lessons/whats-the-difference-between-a-cryptocurrency-like-bitcoin-and-fiat-money/ 2019-05-21

[21]https://cointelegraph.com/news/does-bitcoin-have-intrinsic-value-or-is-it-based-on-thin-air 2019-05-21

commodity, and fiat, Bitcoin doesn't have any intrinsic value as it is not based on commodities like gold or silver. The main criticism of cryptocurrencies is the volatility, as the price determination happens through supply and demand. It cannot be influenced by authorities or governments as it is completely decentralized. A reason for the volatility is the missing market liquidity, along with speculation due to its asset characteristics. Eventually, the arguments are the same: People went back to gold as they didn't trust the government fiat money. Nowadays, people buy cryptocurrencies due to the missing trust in the fiat currency. The cryptocurrency system could be considered as a hedge against fiat currency systems.[22]

Cryptocurrencies have not remained since 2008 but are evolving to fix the issues of Bitcoin such as volatility, electricity consumption, and the possibility of the 51% attack. Furthermore, methods like proof of stake are getting more decentralized and accessible. New cryptocurrencies, with new concepts and technologies, emerged, like Ether. To tackle the volatility of those cryptocurrencies, stable coins have been developed based on fiat money, like (TUSD), or commodities, like gold (PaxGold), which are 100 % based on the USD or gold price.[23]

Other cryptocurrencies like DECA Token will go one step further and develop a semi-stable coin, which is based on a certain percentage of canceled carbon credits. The backup of the token will increase over time, starting from 5% and growing up to 20% over the next few years. Going back in history, the USD was based 40% on gold in 1913, and today, although not officially, the USD is to a certain degree based on oil due to the Petrodollar.

[22] https://www.forbes.com/sites/rogerhuang/2019/08/27/bitcoin-and-cryptocurrencies-are-a-hedge-for-bad-government/#6d26b1f12904 21–05–2020

[23] Thammarak Moenjak, 2014, Central Banking

2 Quantitative Theory of Money

The quantity theory of money was one of the most influential theoretical developments to the practice of monetary policy by central banks which states that printing money only leads to inflation and rising prices in the long run.[24]

The *quantity theory of money* has its roots in the 18th century (David Hume, Richard Cantillon, John Locke). It states that the price levels of products are determined by the changes in the quantity of money in circulation. Thus, if money becomes abundant, its value falls, and conversely, if money becomes scarce, the value of money increases.[25] The Fisher - Equation, based on the economist Irving Fisher who developed this equation with Milton Friedman in the 20th century, explains the link between money and transactions as follows:[26]

$$M \times V = P \times T \tag{2.0}$$

$$where:$$

$$M = Quantity\ of\ Money\ over\ a\ Period.$$

$$V = Transactions\ Velocity\ of\ Money\ over\ Period.$$

$$P = Price\ of\ a\ Typical\ Transaction.$$

$$T = Total\ Number\ of\ Transactions\ during\ a\ Period.$$

$M \times V$ states the money used to make transactions and in which velocity the money changes from one person to another person. $P \times T$ is about transactions, the price of each transaction, and the number of them. The product of the transaction price equals the money exchanged in a certain period.[27]

In economics, a slightly different equation is used as the number of transactions (T) is difficult to measure. Thus, it is replaced with Y, the amount of output of an economy:

[24] Thammarak Moenjak, 2014, Central Banking

[25] https://www.richmondfed.org/~/media/richmondfedorg/publications/research/economic_review/1974/pdf/er600301.pdf 2019-05-21

[26] Mankiw, Ball (2010): Macroeconomics and the Financial System

[27] Mankiw, Ball (2010): Macroeconomics and the Financial System

$$M \times V = P \times Y \tag{2.1}$$

where :

M = *Quantity of Money over a Period.*

V = *Transactions Velocity of Money over Period.*

P = *Price of a Typical Transaction.*

Y = *Output.*

The right-side of the equation ($P \times Y$) can be considered as the economic output of a nation: the nominal GDP, with Pas GDP Deflator and Yas real GDP.

The quantitative money theory has been criticized heavily by John Maynard Keynes and other economists who claimed that assumptions like unemployment and interest rates have been ignored. Furthermore, it is a static model, ignoring the dynamics of the economy. Nonetheless, despite the critics, the quantitative monetary theory is a widely accepted model to determine exchange rates. As the exchange rate is a relative price of two currencies, the money supply and demand is an important factor to consider.[28]

Economic models like the quantitative theory of money do appear more and more in cryptocurrency literature. There are intentions to value Bitcoin with the theory and also Vitalik Buterin, the developer of Ether used a modified version of the equation, translating it to market capitalization (MC) equal to the economic value transacted per day (T) times the holding time (H). Buterin also mentioned that this is a static model assuming that the number of users being there. However, all terms are dynamic as the number of users can change; the price can change as well as the holding time.[29]

The consultant company Ernst & Young considers the valuation of utility tokens with the quantitative theory of money as the right approach due to the meaningful parallels with fiat currencies and its function as a medium of exchange.[30]

They apply the quantity theory of money in the following way:[31]

[28] https://www.ukessays.com/essays/economics/the-three-models-of-exchange-rate-determination-economics-essay.php#:~:text=The%20equilibrium%20of%20goods%20market,rate%20according%20to%20portfolio 2019-05-21

[29] https://vitalik.ca/general/2017/10/17/moe.html 2019-05-21

[30] https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/emeia-financial-services/ey-the-valuation-of-crypto-assets.pdf 2019-05-21

[31] https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/emeia-financial-services/ey-the-valuation-of-crypto-assets.pdf 2019-05-21

- -The Money Supply is the number of tokens fixed (M) by the developers, and the floating factor (f) equal to one minus the percentage of the tokens retained as a reserve.
- The Money Velocity can be the inverse of the average time a token is held by a web wallet.
- The Volume of Goods and Services Transacted are market size (D) and market share (s) changing the GDP term Y from equation **(2.1)** in two components.
- The Price Level can be put as fiat denominated quantity, and an increase of it corresponds to inflation.

The result of the equation is as follows:[32]

$$p = \frac{1}{P} = \frac{D \times s}{M^* \times f \times V} \tag{2.2}$$

where :

p = Token Value. P = Price Level. D = Market Size.
s = Market Share . M^* = Total Token Supply . f = Float Factor.
V = Token Velocity.

One critical factor which is not considered in this model is the time value of money to discount the output of the formula with an adequate discount rate to finish the valuation.[33]

In the next section, we will determine the price mechanism of the DECA Token, which is, like other cryptocurrencies, a modified version of the quantitative theory of money.

[32] https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/emeia-financial-services/ey-the-valuation-of-crypto-assets.pdf 2019-05-21
[33] https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/emeia-financial-services/ey-the-valuation-of-crypto-assets.pdf 2019-05-21

3 DECA Token price determination

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The objective of this section is to define the methodology to establish the price mechanism of a semi-stable coin. The token has a backup resulting from an Initial Coin Offering and gradually uses this to append a commodity which, in this case, are carbon credits.

Taking the original Fisher Equation $M \times V = P \times Y$, we define the terms as follows:

- Money Supply (M)represents the Ether's raised in the ICO and the carbon credits bought and cancelled before and after the ICO expressed in Ether.
- Velocity is how many times the token is changing hands or rather DECA wallets. It is static in the DECA token model as our token cannot be sold on an exchange.
- The Output ($P \times Y$) represents the DECA Token price expressed in the value of Ether and the carbon credits cancelled expressed in the value of Ether multiplied with the quantity of DECA Total Supply.

The following terms are defined in order to get an easier understanding of the base variable of our model:

1. **CCTS:** *which stands for Carbon Credits Total Supply.*
2. **ETHTS:** *which stands for Ether Total Supply.*
3. **DTS:** *which stands for DECA Total Supply and where DECA is the name of our token. This includes the token printed and the floating factor.*
4. **PPD(ETH)**: *which stands for Price per DECA expressed in Ether.*

$CCTS$ and $ETHTS$ are equal to the money supply M whereas DTS is equal to the quantity output Y in equation **(2.1)**

There are two methodologies to establish the DECA price mechanism. First, the relation between the before mentioned variables will be analyzed, and the price formula will be established. In the second methodology, we take the before mentioned variables and apply them to the Fisher-Equation.

3.1 Semistable Price Mechanism

Based on the first defined variables, the way to relate them regarding how most of ICO's currently work are these basic relations:

- Relation between CCTS and DTS which we define as RCD:

$$RCD = \frac{CCTS}{DTS} \tag{3.1}$$

- Relation between ETHTS and DTS which we define as RED:

$$RED = \frac{ETHTS}{DTS} \tag{3.2}$$

- Relation between CCTS and ETHTS which we define as RCE:

$$RCE = \frac{CCTS}{ETHTS} \tag{3.3}$$

Note that equation **(3.1)** where $RCD = \frac{CCTS}{DTS}$ = DECA lowest price as the backup percentage will be measured by the Carbon Credits Total Supply that will gradually increase in this semistable model proposal.

Regarding the basic relation equations, we can consider that **(3.1)** and **(3.2)** are obvious mathematical components that represent our hybrid (semistable) cryptocurrency-based assets. Based on that mathematical fact, we define our **(3.4)** equation:

$$RCD + RED = \frac{CCTS}{DTS} + \frac{ETHTS}{DTS} = \frac{CCTS+ETHTS}{DTS} \tag{3.4}$$

3.2 Quantitative Money Supply Approach (THE DECA PRICE APPROACH)

The quantitative money supply or Fisher - Equation **(2.1)** adapted to the DECA Project is as follows:

$$ETHTS + CCTS \times V = PPD(ETH) \times DTS \tag{3.5}$$

The left part of the equation gives us the total investment in Ether (Also known as Ether Total Supply or ETHTS) at the promotion week, which is raised during the ICO and the expense to purchase carbon credits before the ICO expressed in Ether.

The right part of the equation represents the Price per DECA Token times the DECA Total Supply, which has been printed during the ICO as a consequence of the Ether investment.

Based on these mathematical facts, we can recast the equation **(3.5)** in order to get the Price per DECA which might follow the next mathematical fact in ether units:

$$PPD(ETH) = \frac{(CCTS(ETH)+ETHTS)\times V}{DTS} \tag{3.6}$$

3.3 Equation testing

Since our model is based on the mathematical relation between equations **(3.1)** and **(3.2)** (base components), we will consider CCTS and ETHTS as our base mathematical factors (components) that have a straight relation with the DTS. Based on that mathematical fact equaling this relation with a unitary price, we reach the next definition:

Considering:

$$RCD + RED = 1$$

and by substituting their values from the first cell we get to:

$$\frac{CCTS}{DTS} + \frac{ETHTS}{DTS} = 1$$

The equation (3.5) can be conducted as:

$$\frac{(CCTS(ETH)+ETHTS)\times V}{PPD(ETH)\times DTS} = 1 \tag{3.7}$$

4 DECA Token Price Model: Data Analytics

In this section, we apply the equation and assumptions from section 3 to establish a DECA Token price model.

DECA'S Ether Total Supply Minimum Goal

which is: 70 000 Ether

NOTE: That even if it's for educational purposes, we have considered the legal issues and assumptions matching North American securities regulations. This provides an additional level of security to DECA partners.

We consider two date frames:

- ICO: 01 of July to 15 of September 2020 *
- Post ICO: 16 of September 2020 to 16 of September 2023

*The final ICO date might vary around 15 days as it is still in revision.

In the pre-ICO phase, DECA already invested in and canceled carbon credits. **Image 2** shows the investment goal and the percentage of carbon credit backup.

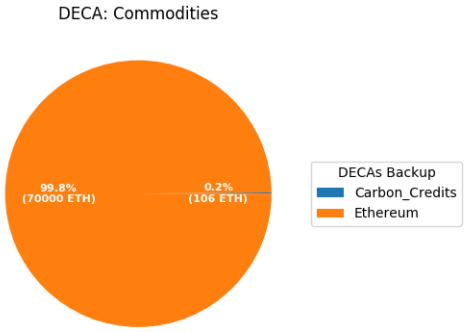

Image 2. Carbon Credit Backup before ICO, Source: Own Development.

Other important considerations which only apply in DECA's Smart Contract Design and model assumptions are:

DECA ICO promotion dates

PROMO	TIME (WEEKS)	DECA TOKENS PER ETH
pre-ICO	1	300
Bonus1	2	275
Bonus2	3	250
ICO	5	225

NOTE: Consider 2.5% of the DECA Token Market Capital that goes to the contract owner. This is considered in the DECA Total Supply (DTS.) and applies to all Models

dates	Total DECA Per Day	Total ETH Per Day	DTS	ETHTS	CCTS
2020-07-01	239875	910.0	2.458719e+05	910.0	106.611364
2020-07-02	239275	910.0	4.911287e+05	1820.0	106.611364
2020-07-03	239125	910.0	7.362319e+05	2730.0	106.611364
2020-07-04	238225	910.0	9.804125e+05	3640.0	106.611364
2020-07-05	238175	910.0	1.224542e+06	4550.0	106.611364
...	...	...	...	...	...
2020-09-11	238025	910.0	1.787231e+07	66430.0	106.611364
2020-09-12	239950	910.0	1.811826e+07	67340.0	106.611364
2020-09-13	239475	910.0	1.836372e+07	68250.0	106.611364
2020-09-14	238500	910.0	1.860818e+07	69160.0	106.611364
2020-09-15	220350	840.0	1.883404e+07	70000.0	106.611364

Table 1. Data set ICO, Source: Own Development

Table 1 shows a data set that simulates the ICO from July 1st to September 15th, 2020, with a constant Ether investment quantity per day (910 Ether) to reach the 70 000 Ether by the end of the ICO. Furthermore, it reveals the accumulated Ether Total Supply (ETHTS) and the carbon credit backup (CCTS) in Ether during the ICO, which is constant at 106.61 Ether. The simulation does not consider the promotion in weeks, but the Total DECAs per Day includes the DECA´s emitted per Ether and the floating factor of 2.5%.

dates	CC Percentage Backup (%)	DECA Lowest Price (ETH)	DECA Price(ETH)
2020-07-01	10.486934	0.000434	0.004135
2020-07-02	5.533621	0.000217	0.003923
2020-07-03	3.758406	0.000145	0.003853
2020-07-04	2.845541	0.000109	0.003821
2020-07-05	2.289462	0.000087	0.003803
...	...	...	...
2020-09-11	0.160230	0.000006	0.003723
2020-09-12	0.158068	0.000006	0.003723
2020-09-13	0.155964	0.000006	0.003722
2020-09-14	0.153915	0.000006	0.003722
2020-09-15	0.152070	0.000006	0.003722

77 rows × 3 columns

Table 2. DECAPrice(ETH) in ICO, Source: Own Development

Table 2 shows the carbon credit backup in percentage, the DECA lowest price equation **(3.3)**, and the DECA price from equations **(3.4)** & **(3.6)**, which are expressed in Ether units. As the DECA project developer purchased and canceled carbon credits before the ICO launch, the DECA token simulation model starts with a backup of 10.48% at a fixed daily investment of 910 Ether, which decreases constantly until reaching 0.15% by the end of the ICO. The DECA lowest price reveals the price that the DECA Token cannot drop below due to its semi-stable characteristic. The reason is that the carbon credit backup is decreasing if Ether investment is increasing. The DECA project developer will buy the quantity of carbon credits after the ICO to reach a backup of 5%, which will lift the percentage backup to 5% and the DECA lowest price.

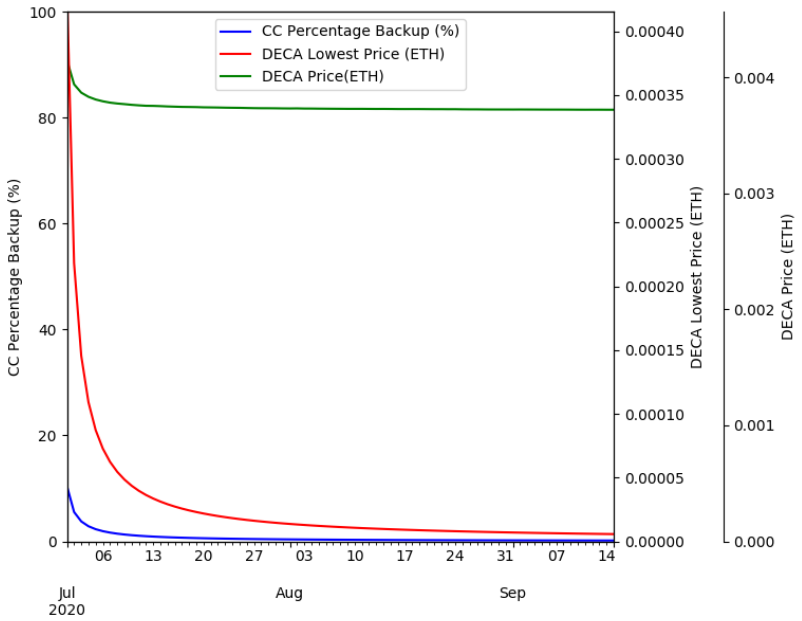

Image 3. DECA Token Price Development ICO, Own Development.

Image 3 shows the same data set as a diagram where axis y1 is the carbon credit percentage backup, axis y2 is the DECA lowest price equation **(3.3)**, and axis y3 is the DECA Token Price expressed in Ether equations **(3.4)** and **(3.6)** during the ICO. The slope of all curves is negative to the CC Percentage Backup, which means that a linear relationship exists. The DECA Price (Ether) drops 89.25% compared to the starting price, but the DECA lowest price results with only a minimum Percentage(%) change.

dates	DTS	ETHTS	CCTS	DECA Price(ETH)	DECA Lowest Price (ETH)	CC Percentage Backup (%)
2020-07-01	2.458719e+05	910.0	106.611364	0.004135	0.000434	10.486934
2020-07-02	4.911287e+05	1820.0	106.611364	0.003923	0.000217	5.533621
2020-07-03	7.362319e+05	2730.0	106.611364	0.003853	0.000145	3.758406
2020-07-04	9.804125e+05	3640.0	106.611364	0.003821	0.000109	2.845541
2020-07-05	1.224542e+06	4550.0	106.611364	0.003803	0.000087	2.289462
...	...	...	...	...	...	...
2023-09-11	1.883404e+07	56000.0	14106.611364	0.003722	0.000749	20.121656
2023-09-12	1.883404e+07	56000.0	14106.611364	0.003722	0.000749	20.121656
2023-09-13	1.883404e+07	56000.0	14106.611364	0.003722	0.000749	20.121656
2023-09-14	1.883404e+07	56000.0	14106.611364	0.003722	0.000749	20.121656
2023-09-15	1.883404e+07	56000.0	14106.611364	0.003722	0.000749	20.121656

1172 rows × 6 columns

Table 3. DECA Token Post ICO, Own Development.

Table 3 shows the DECA Token price development with and after the ICO, 77 days plus 3 years. As the ICO ends, the smart contract is not able to print new DECAs, and the DECA total supply remains constant (column 1). The CCTS(ETH), which represents the carbon credit backup in Ether, increases from 106 to 14,106 as DECA increases the Carbon Credits (CC) Percentage Backup by 5% gradually until it reaches 20% at certain dates in order to give the DECA Token a stronger backup. Consequently, the DECA´s lowest price increases to 0.000749 (ETH) at a backup of 20%.

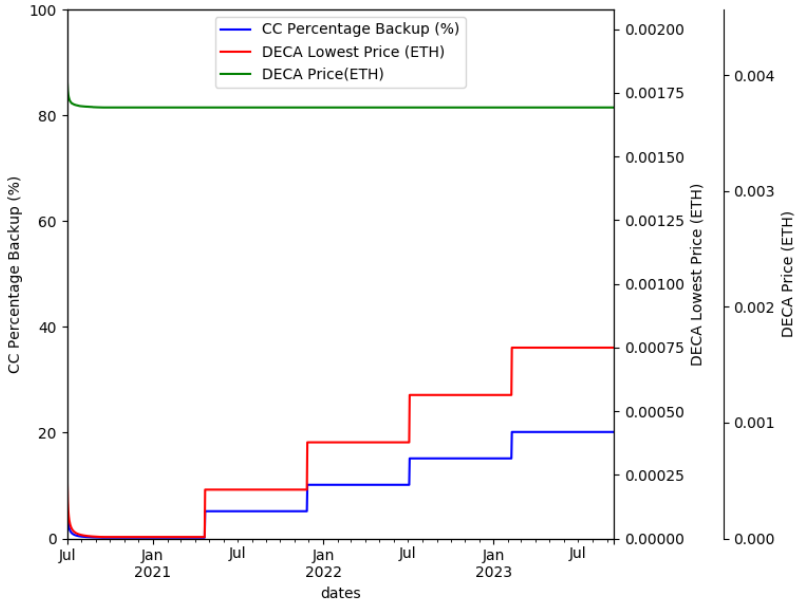

Image 4. DECA Token Price Development Post-ICO, Source: Own Development.

As **Image 4** shows, after the ICO, the DECA Token price (y1) expressed in Ether will remain the same until DECA Currency is developed. The DECA lowest price (y2) will increase gradually due to the incremental carbon credit backup (y3) from 5% to 20%.