

AVALO-energy – Whitepaper

Introduction

AVALO-energy is a power supply project that aims to combine the future oriented blockchain technology with a smart and environmentally friendly use of renewable energy. The focus is the price reduction of energy generated by natural resources: it needs to be brought down to the low price level of energy from conventional fuels like gas and coal or nuclear power plants. The Initial Coin Offering (ICO) is meant to finance this project. Become a part of AVALO-energy so that jointly we can make our world a better, greener, smarter and more environmentally friendly place!

Vision & Mission

Since Generation Y became more powerful, the 21. century stands out to handle crucial topics a lot more careful, responsible and simple than ever before. Today, all of us have to rethink our current way of life because now, we decide if we will leave a liveable and sustainable habitable earth for the future generations. The only way to achieve this is to do everything possible to stop the advancing climate change and the global warming. Especially when it comes to the generation of energy we always have to rely on profit- driven and power-hungry global corporations that ignore and avoid climate agreements. They exploit our earth for profit maximization and keep on generating energy with fossil fuels, although the technologies and funds for the change to renewable energy production are already available. They just claim that we have to hold on to these obsolete technologies because the coverage was safer and cheaper for the consumer.

The vision of AVALO-energy is to change these conditions and break through the chain of those energy suppliers that exploit nations, continents and mankind.

The AVALO token will be used for peer-to-peer payments between energy supply platforms and consumers. This means that all usual costs of the FIAT currency system are eliminated: Payments become simplified, fees omitted and transaction times drastically reduced. The resulting savings can be passed on to the end user as a direct levy meaning that green energy from renewable resources like solar energy, wind and hydropower will become cheaper and thus more attractive to the end user. The AVALO-energy team is already negotiating with international energy platforms that mainly source their electricity from renewable energy producers and show a positive attitude towards AVALO-energy and our mission. The AVALO token implemented as a fixed payment option on these platforms and enables the consumer to finally draw green electricity at fair prices.

AVALO plans to become the largest independent green energy crowd selling platform in Europe within the next five years. We will achieve this goal through state-of-the-art, scalable technology in the back office as well as through Europe-wide, simple web and app applications that provide consumers with an optimal and simple overview of their energy consumption and optimization.

Through our crowd selling and crowd buying platform, we achieve Europe-wide economies of scale that lead to energy being offered sustainably, reliably and at permanently fair prices. In doing so, we deliberately avoid expensive TV advertising or advertising subsidies in the form of customer gifts such as tablets, e-bikes, etc., which the consumer always has to pay at the end of the day. With our motto "Planet First" we want to sensitize consumers all over Europe / worldwide for more ecological and sustainable thinking and acting.

Green Energy

AVALO-energy has highest demands on the choice of cooperation partners when it comes to energy production from renewable resources like solar, wind and hydropower.

Payments

The AVALO token will be implemented as payment method on certified energy platforms. That leads to cost savings of 15-20% in contrast to using FIAT currencies (EUR / USD).

Make profit with us

Of course, a company like AVALO-energy is profit oriented, too. In contrast to multinational electricity corporations, we do not make profit at the expense of our planet, fellow beings or other nations. This is why our token will only be listed and thus tradable on responsible exchanges.

Help us growing

Only with the support of our Investors can the project grow. So please share our social media channels on Facebook and Twitter. Tell your friends about our green energy and help us to make the world a better place.

Market potential

Europe-wide / worldwide liberalisation offers undreamt-of opportunities. Some markets in Europe / World are already liberalized, others will be added in the next years. The aim of the European Commission in Europe-wide liberalisation is to ensure affordable energy and fair competition.

Market potential USA

In the US, about 323 million households use the electricity supply system. With an annual consumption of approx. 12,950 kWh and an average electricity price of 12.4 cents, the market volume amounts to \$518.000.000.000.

The consumption of fossil fuels is more than 85%.

Market Volume Europe

In Europe, about 220 million households use electricity every day. Approximately 4200 kWh are consumed per household per year, resulting in average electricity costs of about €1.000 per annum. The market volume is 220 billion euros across Europe.

Currently about 15% of the electricity consumed is generated from renewable energy.

Every second European also uses gas with a market volume of €140 billion.

Together this makes a market volume of €360 billion.

With a market share of only 1 %, this makes € 3.6 billion in annual sales.

Market Volume China

In China, about 1,379 billion households are supplied with electricity. With an annual consumption of approximately 3,480 kWh and an average electricity price of 4.5 cents, the market volume is \$2,159 billion.

In China, renewables are on the rise. Already 25% of the consumed

Conclusion

If you look at comparable companies on the stock exchange, they are valued with a turnover multiplier of between four and ten times.

Assuming continuous growth, a valuation of up to €30 billion is realistic.

Every company generates its enterprise value, primarily through the number of customers. The customer decides whether the product has a significant benefit and whether he needs it.

Every one of us needs and uses energy on a daily basis. We do not want and cannot do without this product. That's why we have consciously chosen the energy market. In case of a change of the energy supplier, the customer usually does not incur any additional costs and the benefit remains 100% the same.

We are therefore operating in a market with 100% desirability. This is not about annoying re-ordering quotas or the delivery of goods.

Nobody questions this product and nobody wants to do without it. It only plays a subordinate role from which supplier the customer receives his monthly bill, because the energy is always the same.

Companies all over the world spend billions to convince the customer of your product. They go different ways to reach the customer. For example: TV advertising, print advertising, sponsoring or Internet advertising. The companies already spend more than 1000 € per new customer!

AVALO-energy goes exclusively via SEO / SEM (search engine optimization and marketing) and via classic viral marketing, where a satisfied customer recommends the product. Thus we save a majority of the usual marketing costs for customer production, from it the customer profits in the form of lasting, favorable prices.

Solutions from AVALO-energy

AVALO-energy carries out an ICO in which utility tokens (AVALO tokens) are sold. Properties of the AVALO tokens:

- Staking (holding) of a certain number necessary to participate in the AVALO community (access to the AVALO platform as customer or producer/service provider) according to the ICO
- Depending on the number, further benefits for end customers when purchasing energy
- Depending on the number, further discounts for producers/service providers on the platform
- "Interest": the more or the longer token are held, the more are added to it
- Possible share (dividend) in avalo surpluses
- Attention: then automatically Security Token with corresponding restrictions
- After completion of the ICO, the token will be listed at crypto exchanges.

After the conclusion of the ICO, the obligation to hold the token in the wallet automatically results in a permanently increasing demand for the AVALO token and thus also a rising price of the token as the community grows. Token holders can choose between permanent benefits in the community and the sale of the token at a crypto exchange.

Since new community members MUST hold AVALO tokens, an additional revenue stream may also be generated for AVALO by the sale of tokens held by the community itself.

The revenues from the ICO are used by AVALO to develop the business and to set up the community platform based on the blockchain.

Company USPs:

- True internationality - First Mover as a pan-European energy supplier
- Think global - act local through national units in the respective countries
- No inherited burdens such as billions in depreciation or old supply contracts with negative margins
- No giant hydrocephalus.
- Open platform on blockchain basis, i.e. no foreclosure of potential competitors, but partnerships without intermediaries
- AVALO enables direct marketing of small eco-producers (solar, wind, biogas, etc. Required remaining quantities of the end customers can be bought at AVALO or also at other providers in the community. Conversely, surplus quantities from small producers can be sold on the AVALO platform to participants.

- Europe-wide cooperation with electrical charging station operators (ready for completion), in the future free choice of the supplier of the charging current by the customer via App
- Various Smart Metering offers and services - free choice for the customer
- By opening the blockchain-based platform for partners, AVALO earns a transaction fee for all transactions. Even if AVALO does not supply the customer itself. Otherwise, only large, old energy companies with revenues from production, network operation and sales can do this. All other AVALO competitors cannot do this and instead earn exclusively from their own sales.
- Numerous new customer groups are developed for AVALO. Example: a customer does not purchase electricity/gas from AVALO at home, but uses AVALO at the charging station for his e-car.

Today's coins (tokens) of Avalo (correctly token options) can be exchanged during or after the ICO by token in AVALO token.

In a second step, the AVALO platform can be supplemented with its own stable coin as currency coin. This can also be done much later and can only be marketed as a vision of the future. Or, if only because of the much higher demands on a currency coin.

The stable coin would be linked 1:1 to the euro and each token would have to be deposited with one euro.

The AVALO Token is then the community payment method. Advantages:

- Genuine peer-to-peer transactions possible under exclusion of intermediaries
- Genuine internationality independent of national currencies in Europe and possibly beyond. No difficulties such as currency differences and exchange rate fluctuations in transactions between members of the community from euro and non-euro countries.
- Integration of many new players and members, especially from up-and-coming countries, possible without any problems.
- Problem-free billing of even small amounts between community members possible with direct sales (e.g. solar roof operators to neighbours). That would be otherwise rather aufw?ndig and only possible over a middleman (bank, credit card enterprise, network carrier).

Every community member who wants to buy/consume energy has to "charge" his virtual AVALO account once or regularly with Euro, which is then "exchanged" into AVALO token (Minting). E.g. in the context of its completely normal monthly calculation. Or as prepaid for the charging station.

As long as the members of the AVALO community buy and sell within the community, the tokens remain in the cycle.

As soon as someone wants to exchange his tokens back into Euro at AVALO, he receives Euros transferred to his account and the corresponding tokens are "burned" out of the system.

Due to the real redeemability in Euro at any time, we achieve increasing acceptance outside the community if we use a widespread blockchain for the AVALO token. Someone who wants to accept the token outside the community only has to have a suitable wallet (e.g. ERC20). Later he can also exchange the token back into Euro without community membership at AVALO.

AVALO-Box

The AVALO Box is based on a minicomputer, which can easily be connected to every home network (LAN, WLAN) in the household.

With the AVALO Box every crowd member and every customer can participate in the decentralized blockchain landscape of AVALO-energy worldwide. Similar to other blockchains, the AVALO Box primarily serves as a node in the network. Thus it secures the decentralized inventory of the AVALO blockchain. Transactions in the AVALO network can be confirmed via the AVALO Box (mining) and transaction blocks can be stored decentrally.

In addition, the AVALO Box can be expanded with applications of various types that store their collected data in the AVALO Blockchain in a decentralized, anonymous and encrypted manner. These functions connect to and/or extend various smart metering services in the network or in communication with other AVALO boxes.

With the AVALO Box, AVALO-energy physically moves into European households. It integrates seamlessly into existing Smart Home networks or forms the basis for new networks.

Features

- Network node
- Coin wallet
- Mining of coins
- SmartMetering APIs
- POS module for payment processing

Technics

The AVALO Box provides all the classic hardware functions of a conventional PC – and more.

- CPU & RAM
- Memory
- LAN/WLAN
- USB
- HDMI
- GPS (optional)
- Bluetooth
- Minidisplay (AVALO Box with POS)
- Camera (optional)
- and many more connections

At the time this document was written (September 2019), AVALO had already developed the second prototype and is testing the core functions.

Application Examples

- Storage of electricity contracts, electricity bills, consumption data, credit notes and bonuses for customer loyalty programs are stored in the blockchain. The AVALO-Box acts as a wallet, network node and interface in the home network.
- Collect and store consumer data and create consumer profiles of all end devices. Consumer profiles are stored in the global blockchain. The constantly growing database of devices allows detailed prediction and calculation of electricity prices. In addition, AVALO can offer its members a comparison platform for energy consumers (appliances) so that energy guzzlers can be replaced with energy-saving appliances.
- Moving to another apartment, to another house - The AVALO Box is the "take-away electricity meter". Within the AVALO network, annoying changes of address are no longer necessary. Plug it in, resynchronise, enter the meter number and you're done.
- Earn money with the AVALO Box. With the confirmation of transactions of invoices, credits (e.g. for customer advertises customer program) or C2C transfers, coins are credited in the wallet (mining process).
- Collection and storage of statistical end-user data for the optimisation of energy resources.

- Collection of data for electricity feed-in. Members of the AVALO-crowd who contribute to the electricity production (e.g. wind power, solar energy, hydropower) get their electricity credited via the AVALO-Box or the integrated wallet. Coin rates, electricity price and demand determine the selling price of the electricity.
- The AVALO-Box serves as a gateway for mobile electricity purchases and billing to the second. Charging stations for mobile devices (smartphones, laptops, tablets, MP3 players, etc.) in hotels, camping sites, public transport, public places and restaurants can be accessed via the AVALO Box.
- E-Mobility charging stations are connected to the blockchain via the AVALO box. Charging cycles are billed directly via the AVALO Wallet and the App. The same goes for car and bike sharing rental costs from cooperation partners.
- Electrical equipment for rent or chargeable use is billed directly via the blockchain. From the hair dryer in the hotel to the washing machine in the launderette or the car wash, all scenarios are conceivable. A display turns the AVALO Box into a POS terminal and can also receive coin payments from SmartPhones via QR code scan.
- Time-consuming connection blocks and unblocks due to escalated dunning levels can be processed in seconds via the blockchain.

AVALO Box Software Features

- The Power Of Us (Community)
 - various maps show power availability and other community members (AVALO boxes)
 - Green Power Map (shows the availability, free resources of "green energy" that can be obtained directly from another member)
 - Mobile Power Map (charging stations for mobile devices, e-scooters, e-scooters, e-bikes, e-cars -> s. Reward system)
 - Free WLAN Map (Each member can set up his AVALO Box as an AVALO HotSpot and share his Internet connection with others. -> s. Reward system)
 - User Level (badges, digital awards and reward systems with gamification character)
- Power Marketplace
 - Feed-in of electricity and reward through Coins
 - targeted purchase of type X energy at price Y

- Power Sharing (see Free 'Mobile Power Map' - Share your power connection / target groups are private households, restaurants, hostels, workspaces, service stations, gas stations... worldwide, billed via one coin. The box becomes a digital electricity meter and billing device)
- Power Backup
 - Indication of available energy stored in-house in rechargeable batteries
- Power Optimizer (Automatically save power)
 - Light off! (Illuminants that are equipped with sensors recognize whether someone is in the room. Light is switched on and off accordingly)
- Power statistics
 - Consumption data in scalable graphs
 - Multi-layer views for displaying comparison data (own consumption vs. average consumption, own consumption vs. max consumption, own consumption vs. min consumption, own consumption in retrospect, yearly comparison, weekly comparison, daily comparison)
 - How much power/money could be saved with the Power Optimizer?
 - Device runtime statistics (Smart Metering Data) with additional information (warranty period, average service life, product recommendation for more efficiency or cost and energy savings)
- Stealth Mode
 - Restrictions on various services and community functions, but allows 100% anonymous operation of the AVALO Box (Tor Net, VPN Encryption, etc.).

AVALO Box Software Features (Mobile App)

- display for maps defined above (Power Sharing, WLAN Sharing, Car/Bike/Scooter Sharing)
- Integration of e-mobility sharing services via API
- Complete control of electrical devices
- Home Security Service (100% encrypted and without foreign cloud service)
- Monitoring and alert system for critical devices (e.g. irrigation pumps, medical equipment, heaters, ventilation systems)

AVALO Box Hardware Features (based on our prototype 09/2019)

- CPU (64 bit) 1.2 GHZ Quad-Core + CPU
- 3GB HDD (SSD)
- 1GB RAM
- WLAN 802.11n
- 1 Network Connector 10/100 MBPS
- 2 USB Ports
- Power Port
- Self Cooling Case (no fan necessary)

Partners & Suppliers

- Vodien Internet Solutions Pte Ltd.
- Micropayment GmbH
- Bitpay Inc.
- Amazon Web Services Inc.
- Stripe Inc.
- The Rocket Science Group LLC. (Mailchimp)
- e:mondo S.A.
- ESS – Energy Sales & Services GmbH

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Restricted Areas

As AVALO token is utility token by its nature, there are no restrictions to sell them to residents of any country, unless the law of the Buyer's country prohibits citizens of that country to buy digital assets of any kind.

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