



C-CHARGE

WHITEPAPER

CRYPTO FUELED – ELECTRIC CHARGED

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ABSTRACT

Industrialization and global commercialization led to the exploitation of natural resources due to the increased need for power and fuel. But technological advancements can be used to sustain these natural resources and preserve them for future generations. The advent of Electric Vehicles (EV's) is one such initiative taken by the automotive industry to eliminate carbon-producing vehicles and transition to sustainable transport systems. While EV's have proven to be an environmentally friendly mode of transport, they require a large charging infrastructure for seamless operation. With a limited number of charging station infrastructure that is inadequate to support the current number of EV's on the road. With projected numbers of EV's expected to increase exponentially in the coming years, the infrastructure for charging and its billing and maintenance network is not properly developed to sustain the growth necessary for the widespread adoption of EV's. Aside from a small majority of charging station operations that utilize solar power for their electricity generation, the majority of charging stations are connected to the electrical grid which presents problems in itself. The biggest issue when it comes to public charging stations is transparency in pricing. There is no set standard for charging customers and, there is always a question of trust and transparency. The countries that encourage the use of EV's have not taken uniform initiatives to prevent fraud in the payment systems that charging stations utilize. There is also a lack of uniformity in the payment gateways that are utilized across different charging stations. There is no universal payment system that supports multiple charging stations across the continent. C+Charge is aiming to become the universal solution for the charging station industry, harnessing the power of blockchain technology and decentralized finance. to create an EV charging payment system that creates a universal solution for the industry while providing utility, value, trust, and privacy for customers.



INTRODUCTION



C+Charge has built a robust Peer-to-Peer (P2P) payment system for EV charging stations built on blockchain technology. Users are allocated individual electronic wallets, which they can use to pay for the charge at charging stations across the continent. C+Charge's payment system is powered by the C+Charge cryptocurrency that acts as the utility token to pay for each charge. Utilizing the crypto wallet and point of sale system significantly reduces human interaction. Hosting the system on the blockchain increases transparency and trust among EV users.

C+Charge utility tokens will also accumulate carbon credits for its users to utilize in the future towards another EV purchase; the system will also help manage carbon credits that are accumulated by owners of EV charges themselves. C+Charge is poised to be a revolutionary concept that will work to bring standardization to EV charging station owners, EV owners, EV fleet managers, and policymakers to reduce the friction associated with the implementation and management of EV charging by creating a standard across the sector to be utilized that reduces the average transaction latency and enhances transactional throughputs, creating more efficient charging stations with one easy-to-use payment option across two continents. creating a user experience for all stakeholders that will allow for greater adaptation and growth of the greater EV industry., resulting in the further reduction of carbon pollution and a cleaner environment that will benefit generations to come.

BLOCKCHAIN AND TRANSACTIONS

The introduction of blockchain technology in various emerging fields has given the world a new direction. Blockchain helps track the transactions in a secure ledger and ensures the data is tamper-free. C+Charge's proposed electronic wallet-based payment for EV charging saves a lot of time, resources, and efforts to go into the tasks of charging simply and more safely than they are now. The payments done with C+Charge tokens are hash encrypted, and these hash values play a significant role in the transactions. C+Charge uses a distributed ledger for carrying out its operation, which uses Secured Hashing Algorithm (SHA-256) for transactions. Once the user pays for charging, the transaction details are added as a block in the blockchain after the miners validate it. After validation, the data gets appended to the chain of blocks based on the time-stamps, and Merkle structure. The utmost advantage of using blockchain for a transaction is its decentralized nature. The data is widely distributed across every node in the network. A copy of transaction details is available for everyone, making it tamper-free. Also, there is no need for any intermediary financial body or payment processor to carry out the transaction. New blockchain can be added to the blockchain, but altering the pre-existing ones is practically impossible; safety is paramount. Blockchain wins users' trust and is reliable and highly recommended to solve modern problems.

A smart contract is one of the key features of blockchain that makes trustless payment seamless. C+Charge deploys smart contracts for its charging payment systems, where the funds are released when certain conditions are met (Charging in this case). Having a transparent ledger is crucial to capture data to be used for token holders when tabulating carbon credits earned from the ecosystem. The same ledger will also be utilized by charging station owners to give irrefutable proof of earned carbon credits. The power of blockchain will provide real-time data for users of the system to view charger availability, which is the biggest lynchpin to scalability, as chargers located in cities service multiple cars, creating long queues. This feature is very important for fleet services, as it will allow fleet managers to schedule and optimize charging times for their vehicles, maximizing the efficiencies of their fleet.

PROBLEM STATEMENTS

✔ No Single Payment Solution

EV charging follows a deregulated system. The drivers or fleets can subscribe to any charging station,, independent of location. But this mobility in the EV charging system is not satisfactorily covered. An EV owner charging their vehicle at a local EV charging outlet cannot directly pay the EV charger service provider and/or EV charger owner without an intermediary payment system. The subscription to provide these services varies between different localities and service providers. Additionally, there is not a universal subscription solution as these services tend to be very provincial and applicable in other locations, making EV charging systems non-interoperable. . Many of the EV chargers provide custom solutions for proprietary systems that rely on closed digital memberships and operator-specific cards for operators and automakers receiving payments. These methods are somewhat restrictive and do not provide broader market requirements. No one payment system supports all. This mobility gap in the EV charging system is one of the leading factors preventing the mass adoption of EVs.

✔ Lack of Real-Time Information

The worst driver experience begins with pulling up to a non-functioning charger. Physically damaged chargers and software malfunctions are the two biggest causes of chargers malfunctions that require a site visit to fix. No software in the current EV charging sector transmits real-time diagnostics data to EV service providers (EVSPs) that assist in diagnosing and fixing issues in real-time. This leads to instances where charging stations in larger networks can be off-line for weeks. This improper maintenance protocol leads to customer discontentment, and further spreads “charger anxiety”, the fear that vehicles will run out of battery on the road and not be charged, which is the number one cause of EV hesitancy among consumers.

PROBLEM STATEMENTS

✔ Shortage of Charging Solutions

A recent study by the International Council on Clean Transportation indicated that 10,000 more charging stations will be required to support EVs traveling on inner-city corridors by 2025. This is based on current trends of increasing EV ownership. However, parking garages are rarely equipped with charging infrastructure for EV owners who live in apartments, and building managers are hesitant to install such infrastructure because of the added maintenance and training costs. pr. Communal space also has the additional issue of electric costs and the question of who incurs these costs at common outlets. Because regular EV charging consumes more energy than most other residential uses, building managers need a mechanism to monitor EV charging to ensure the driver of each vehicle pays for their own electricity usage.

✔ Carbon Credits

Issues in verifying carbon credits earned. Cumbersome process for charging stations. More challenging process for individuals to accumulate them

INTRODUCING C-CHARGE

C+Charge proposes a blockchain-based complete EV charging ecosystem that delivers a revolutionary charging experience to EV owners and drivers. C+Charge offers a variety of solutions, including but not limited to a network of operated charging stations located nationally, parking garage charging solutions, a transparent payment system powered by C+Charge utility tokens, real-time data transmission to EVSPs for easy diagnosis of chargers, and a comprehensive solution for indexing and processing carbon credits. C+Charge's proposed network and utility token address the economic and infrastructure issues that are inhibiting the growth of the EV market. With rising energy prices, regulatory restrictions on carbon emissions, car manufacturers introducing new EV models every month, and the topic of energy independence at the top of policy maker's agendas, the C+Charge network and utility token comes at a critical juncture where the market is looking for a solution to help propel the fast-growing EV charging networks that will power the EV revolution.



KEY ASPECTS

KEY ASPECTS

Using blockchain technology to provide trust between EV owners and EV charging station owners/operators. The proposed centralized all-in-one charging management app for EV charging stations to support EVs is gaining widespread applicability and credibility due to its potential to change real-world transportation conditions powered by the blockchain's secured decentralized database. Deploying real-time data transmission for diagnosis of charging systems P2P charging payment system for electric vehicles. The EV owners can use the C+Charge application for managing their personal information, EV information, charging details, and making payments. Utilizing the blockchain to simplify the complexity of carbon credits. The key aspects are the use of:

- ✔ P2P charging payment system for Evs
- ✔ Using blockchain technology to provide trust between EV owners and charging stations
- ✔ Deploying real-time data transmission for diagnosis of charging systems
- ✔ Simplify the accounting of Carbon Credits realization



DEFINING POINTS

DEFINING POINTS



EV Charging

Electric mobility is a smart sustainable choice. C+Charge makes it easy & rewarding with little to no friction.



C+Charge Network

C+ChargeNetwork is partnering with major charging networks and manufacturers for the fast and efficient rollout of crypto-supported clean energy.



Charge Points

Thousands of locations worldwide accept C+Charge Tokens to recharge EV batteries.



Electric Driving

The global electric vehicle charging station market was valued at USD 5.86 billion in 2021 and is expected to register a value of USD 53.25 billion by 2027, with a CAGR of 44.44%. According to Refinitiv, the total market size of the global compliance market for carbon credits is US\$261 billion, representing 10.3Gt CO2 equivalent traded on the compliance markets in 2020

MISSION AND VISION

MISSION



While many crypto projects promise their journey to the moon, C+Charge is aimed at making the Earth a better place to live in by powering a network that will help contribute to the reduction of carbon emissions and its' adverse environmental effects.

- ✔ C+Charge envisions delivering a stable and sustainable charging ecosystem for the future.
- ✔ C+Charge is designed to enhance the scalability of EVSPs through real-time diagnostic data transmission to support the growth and mass adoption of EV's
- ✔ C+Charge is creating technology that will ease & promote the movement of all people and goods on clean electricity.

VISION



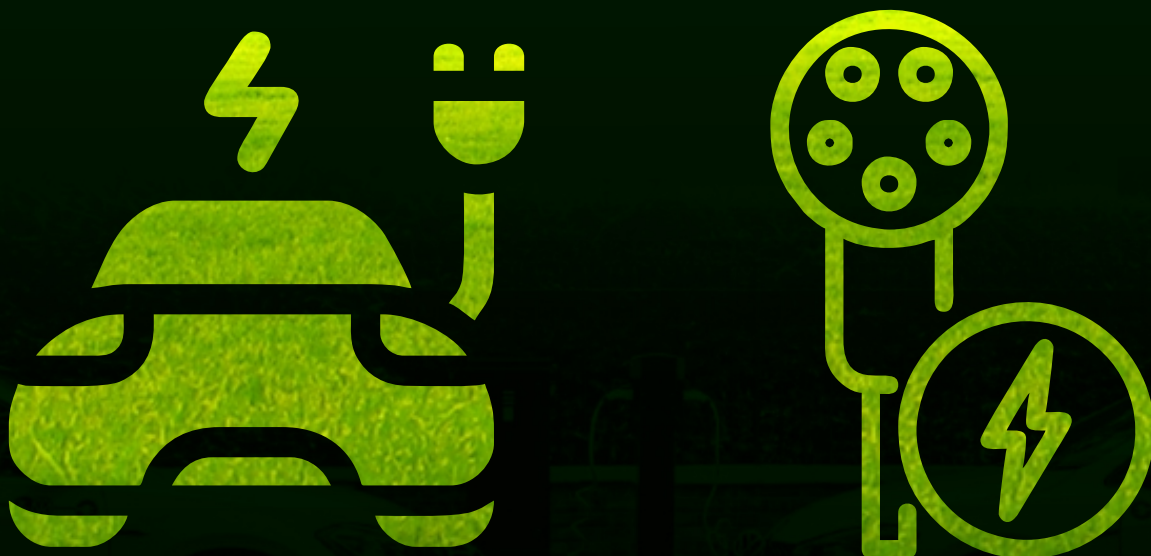
Electric mobility is an environmentally smart choice. C+Charge is primarily focused on offering the best EV charging experience for everyone involved in the migration towards electric mobility, making it easy & rewarding while reducing the existing friction to spur continued sustainable growth for the EV community and token holders.

C-CHARGE THE POTENTIAL SOLUTION

C+Charge is endeavoring to disrupt the EV charging station space. By combining De-Fi, Trad -Fi, NFTs & operating its own charging stations, C+Charge aims to offer a comprehensive platform for the EV sector.

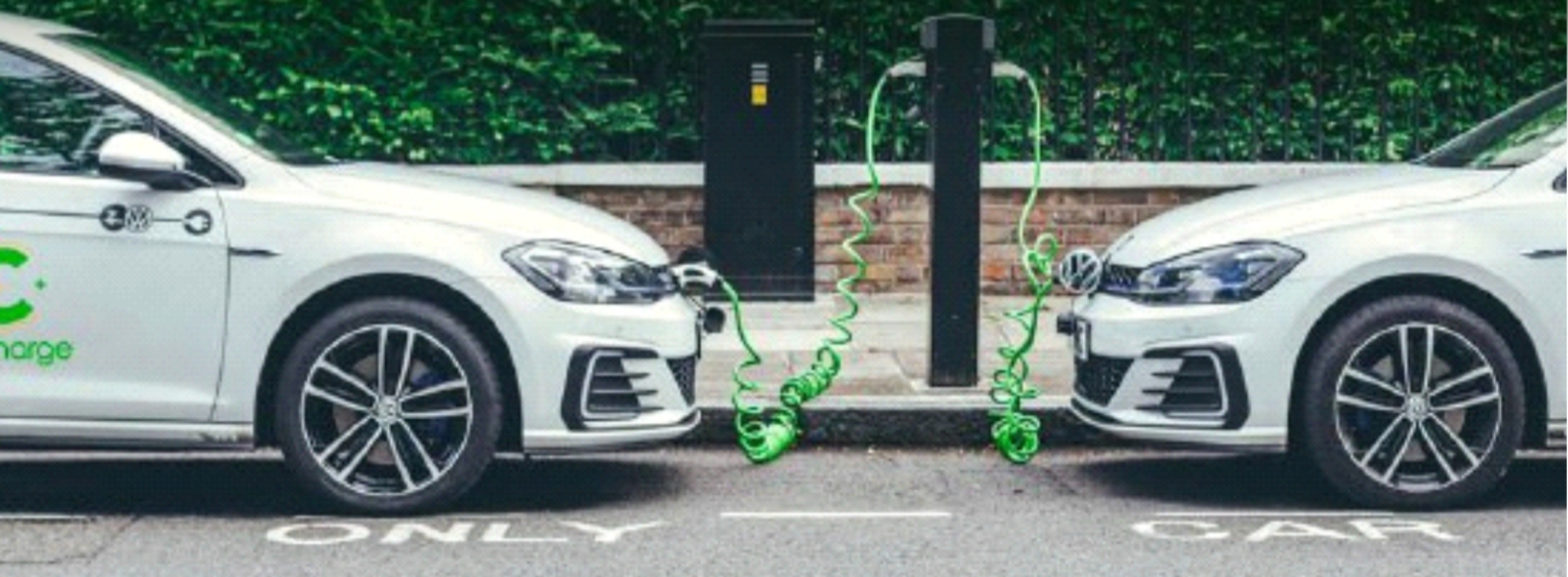
C+Charge believes that the rapid transition to electric mobility is essential to building a sustainable future. Our mission is to create technology that will ease & promote the movement of people and goods utilizing electricity. C+Charge endeavors to build the world's leading crypto-powered EV charging and payment networks by investing in, developing, and deploying a world-class portfolio of EV charging solutions across North America and Europe.

C+Charge aims to provide EV charging accessibility across North America and Europe powered by C+Charge tokens. passenger cars, city buses, heavy-duty trucks, delivery vans, fleets, and other municipal EVs; we aim for C+Charge to manage charging and payment for all types of EV applications. C+Charge will also index, organize and facilitate the process of acquiring carbon credits earned through the network for token holders, a first in the industry, and one that will continue to promote a sustainable future.. By providing an effortless charging experience for companies, fleets, and drivers, C+Charge is creating a new payment fueling model that is good for the planet, good for society, and good for business.

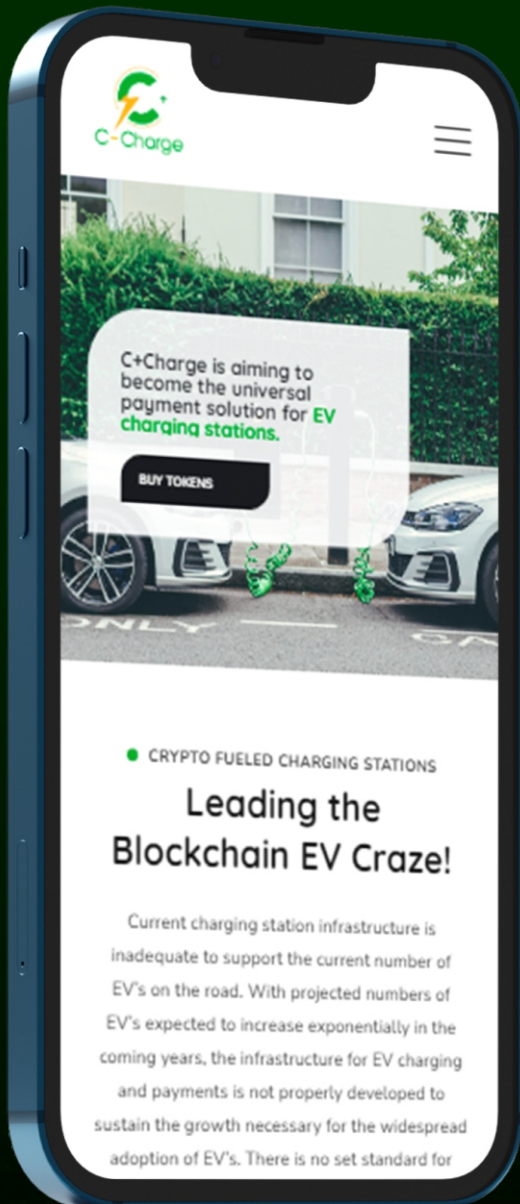


CHARGING SOLUTION FOR COMMERCIAL PARKING GARAGES

There has been a significant increase in the penetration of EVs being parked in commercial garages of apartment complexes and commercial office buildings in cities across North America and Europe. The increased demand for EV's is projected to accelerate in the coming years, dramatically increasing the demand for electrical supplies in these commercial parking garages. To efficiently address the high-cost and management issues associated with EV charging in apartments and other commercial garages, C+Charge will offer a communal charging coordination scheme. This scheme allows easy setup and management of charging ports in garages while reducing the charge load and charging the cost for EVs. This solution that C+Charge is proposing through its technology is expected to be popular with building managers and will hopefully be a difference-maker for management companies who have been hesitant to install EV charging stations because of the added work to manage additional costs on the building's electrical grid. C+Charge provides a comprehensive solution to address these issues by presenting streamlined management and payment solution so that EV charging is done in the most efficient manner, resulting in economic benefit for its stakeholders.



CENTRALIZED APPLICATION



CENTRALIZED APPLICATION

C+Charge's application will become the central platform for all EV owners' charging needs. Aside from managing payments, the app will manage all the end-to-end activities associated with the charging process. The following are the features that the C+Charge application will incorporate;

Features

- ✔ Real-time diagnosis
- ✔ Charging Station technical Diagnosis
- ✔ Geolocated Easy Access Charging Stations Finder
- ✔ Seamless Payment for Multiple Platform Integration Options
- ✔ Carbon Credit Tracker

REAL-TIME DIAGNOSIS

The C+Charge app transmits real-time data to EVSPs regarding the operational status of chargers across locations so that EVSPs can easily diagnose and fix any problems without spending too much time and resources. EVSPs can provide a better experience to EV owners with a back-end system that can communicate with Chargers that detect and diagnose problems in real-time, and enable remote actions to return the charger to a functioning state. These features will help EV owners avoid non-functioning chargers, eradicating long wait times at charging stations by directing EV owners to the nearest available charger. The centralized app delivers real-time information supported by the blockchain, maximizing the efficiency of the network and the EV owner's time.



SEAMLESS ACCESSIBILITY

The C+Charge app transmits real-time data to EVSPs regarding the operational status of chargers across locations so that EVSPs can easily diagnose and fix any problems without spending too much time and resources. EVSPs can provide a better experience to EV owners with a back-end system that can communicate with Chargers that detect and diagnose problems in real-time, and enable remote actions to return the charger to a functioning state. These features will help EV owners avoid non-functioning chargers, eradicating long wait times at charging stations by directing EV owners to the nearest available charger. The centralized app delivers real-time information supported by the blockchain, maximizing the efficiency of the network and the EV owner's time.



SEAMLESS PAYMENT



The C+Charge ecosystem is fueled by its utility token that can be used to pay at C+Charge-managed charging stations as well as partner stations that are on the platform. C+Charge-operated charging stations are equipped with load switch, meter, controller, and unique node information, while the users are provided with digital wallets for payment. The mobile app will allow users to keep track of their C+Charge token balance and other payment information. Any peer or node in the chain can make a transaction, and then the transaction details are combined to form a block. The blocks are verified by the consensus algorithm before it gets added to the blockchain, after which it becomes time-stamped, and at that point, cannot be altered. C+Charge is a pioneer in promoting a consistent, reliable consumer charging and payment experience in the EV sector.

PLATFORM INTEGRATION OPTIONS

When choosing an EV charging platform, owners and operators face a range of challenges, from resource limitations within their IT operations, the ability to support chargers from multiple vendors, integrating networks from acquired companies at different property locations, managing charging capabilities of different EV models, indexing and registering the number of carbon credits earned, and the pressure for continuous availability. C+Charge's blockchain fueled network creates a platform that supports flexible implementation, providing better management options for owners and operators with the C+Charge app that manages all these processes, allowing for the optimization of resources expended and gained.

EV charging platform



CARBON CREDIT

What is a Carbon Credit?

A carbon credit is a permit that allows the owner to emit a certain amount of carbon dioxide or other greenhouse gasses. One carbon credit is equivalent to the emission of one ton of any greenhouse gas. In general, big corporates are incentivized for their reduced emission of carbon dioxide, but they have to spend extra money on exceeding the limit. There is a carbon market that allows the exchange of these carbon credits, where they can sell their extra credits. The ultimate aim of the concept of carbon credits is to reduce the emission of greenhouse gasses into the atmosphere.

C-Charge and Carbon Credits

Obtaining approval and earning carbon credits to be sold to charging station owners is a cumbersome process. A centralized repository managed by C+Charge's blockchain network and its app will help streamline the process and manage the carbon credit programs for owners. C+Charge creates a win-win situation for EV users and charging station owners. C+Charge also has developed a novel method to allow token holders to accumulate carbon credits through a "reflection" program. As part of the transaction taxes, 1% will be dedicated to purchasing carbon credits that will be distributed to token holders proportionately. C+Charge token holders will be able to mint NFTs that authenticate their share of carbon credits earned through these reflections, which can be utilized for the purchase of their own EV or other sustainable infrastructure. This revolutionary utility helps all stakeholders improve the environment, and encourages more of the population to switch to EVs for its environmental and monetary benefits



C-CHARGE SYSTEM MODEL

C+Charge's proposed EV charging ecosystem comprises four basic elements:



THE USER

Users are EV owners or EV charging station owners/managers. Users enroll themselves in the C+Charge system as the end-user for their particular use case. who require charging services.

EV CHARGING STATION

This is a network of EV charging stations that are either operated by C+Charge or utilize C+Charge's blockchain payment network that is supported by C+Charge Utility Token

C-CHARGE APP

The centralized application that shows the nearest C+Charge supported charging stations to the users, holds users' payment wallets that enables them to pay for charging, a real live-time tracker of the history of charges and carbon credits earned. For EV owners a real-time update on the status of all charging stations, carbon credit management, and the ability to make price adjustments as necessary.

BLOCKCHAIN

A public ledger that is designed and developed to provide transparency and tamper-proof security for transactions utilizing smart contracts at greater efficiency and lower cost than traditional ledgers.

WHY C-CHARGE TOKEN?

5%

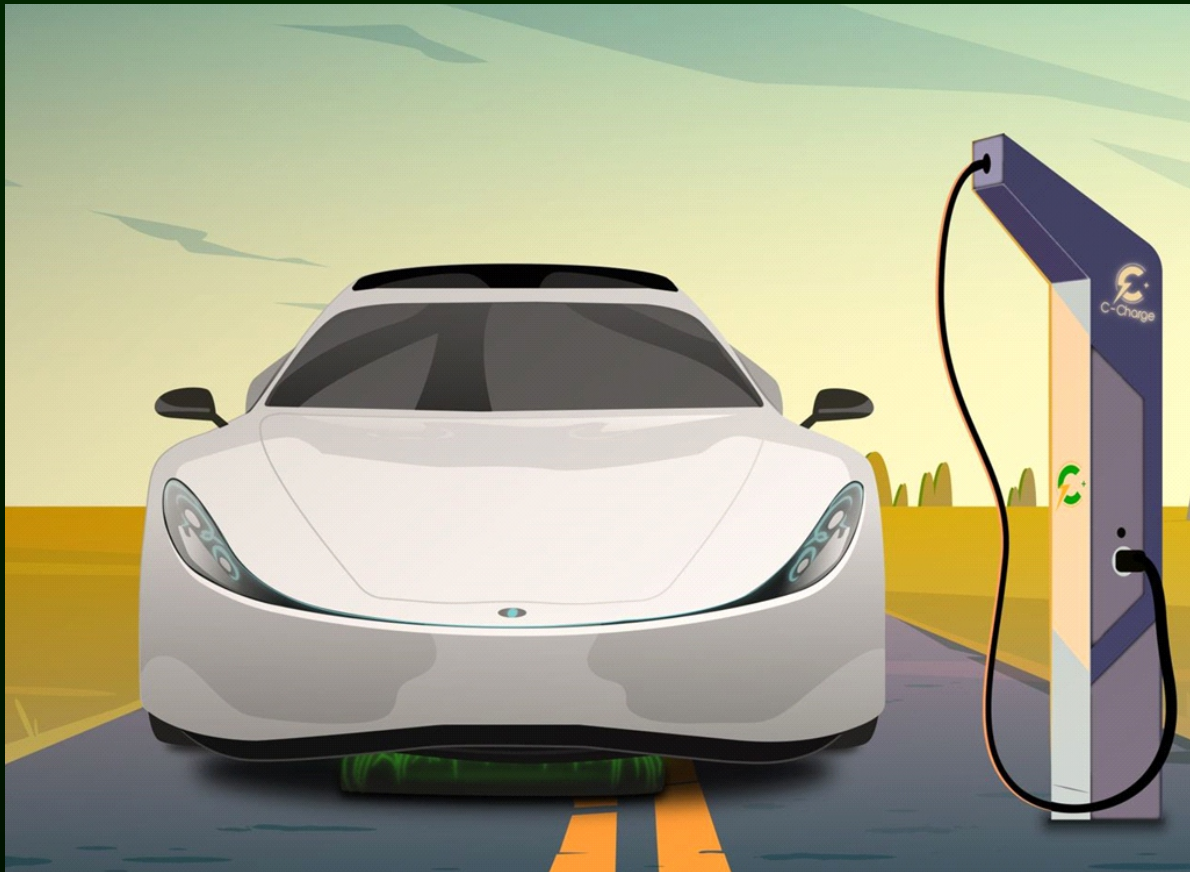
Allocated to Charity
and Environment Funds



- ✔ Unlike meme coins or other cryptocurrencies, C+Charge tokens have a unique utility for a real-life use case
- ✔ Paying with a C+Charge token provides added security with the transaction anonymous and secure
- ✔ C+Charge tokens will earn holders Carbon Credits, a first-of-its-kind feature. Token holders will also be entitled to additional discounts and pricing from C+Charge stations, such as free charges and, exciting offers from partners
- ✔ C+Charge is a BEP-20 standard token, and thus the gas fee is negligible when compared to the ERC-20 tokens. C+Charge was developed to be able to be used for charging EVs in both North America and Europe.

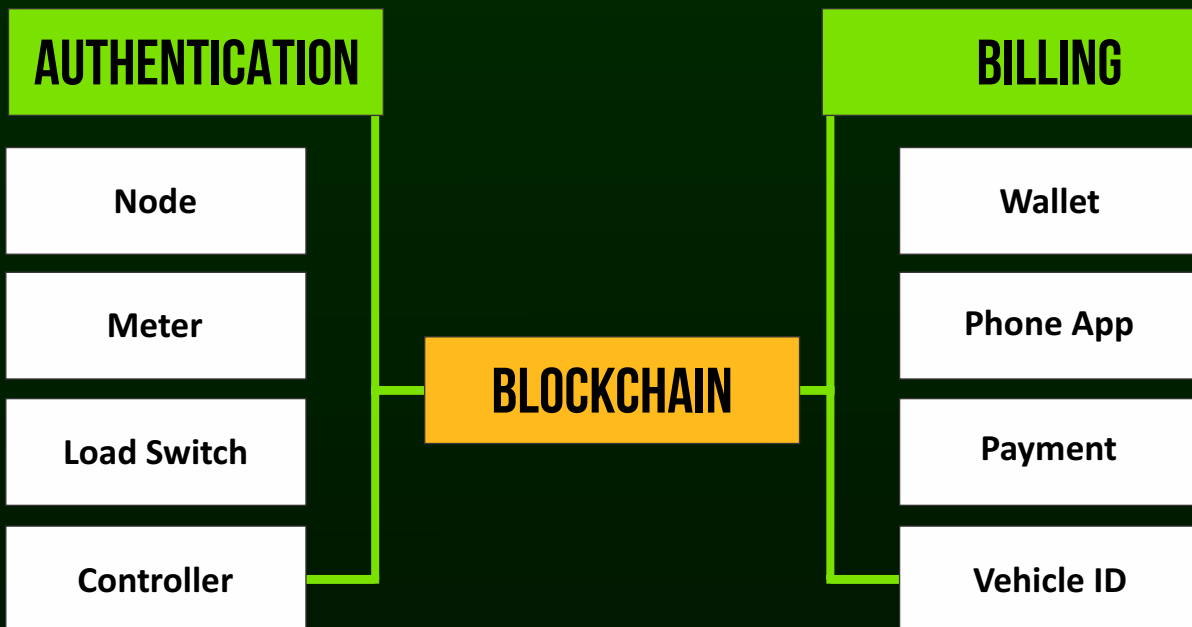
NFTs

In addition to the NFTs created for users to validate their earned carbon credits, C+Charge will offer an NFT program that will focus on artists renditions of EV related concepts. The platform is also working to partner with EV car manufacturers to create limited edition co-branded NFTs to help promote EVs and the C+Charge platform



NFTS

C+CHARGE INFRASTRUCTURE



C+Charge ambitious vision requires ambitious infrastructure development. C+Charge is targeting to operate at least 100-200 of its own charging stations within the first year of launch. C+Charge has identified commercial garages as “low hanging fruit” for expansion. This will require significant resources. The team needed to accomplish this will require resources to complete these tasks. In addition, while North America is in the middle of a huge EV growth phase, Europe has been ahead in the implementation and adoption of EV’s. To penetrate this market effectively, C+Charge will need to expend resources to acquire seasoned talent that will be able to be successful in securing key accounts in that continent.

C-CHARGE TOKENOMICS

	Token Allocation	TGE	Vesting Periods
TOTAL SUPPLY	Angel Sale	5%	3 months cliff, linearly over 36 months
	Private Sale	5%	Linearly over 12 months
	Public Sale (IDO)	20%	Linearly over 3 months
	Community (Staking, Airdrop, and Giveaways)	0%	Linearly over 36 months
	Founders & Team	0%	1-3 month cliff, linearly 36 months
	Ecosystem Fund	0%	Linearly over 36 months
	Partners	0%	Linearly over 12-24 months
	Listings & Exchange Funds	0%	
	Environmental & Charity	0%	Linearly over 36 Months
	Advisor	0%	1 month cliff, linearly over 24 months

TOKEN ALLOCATION

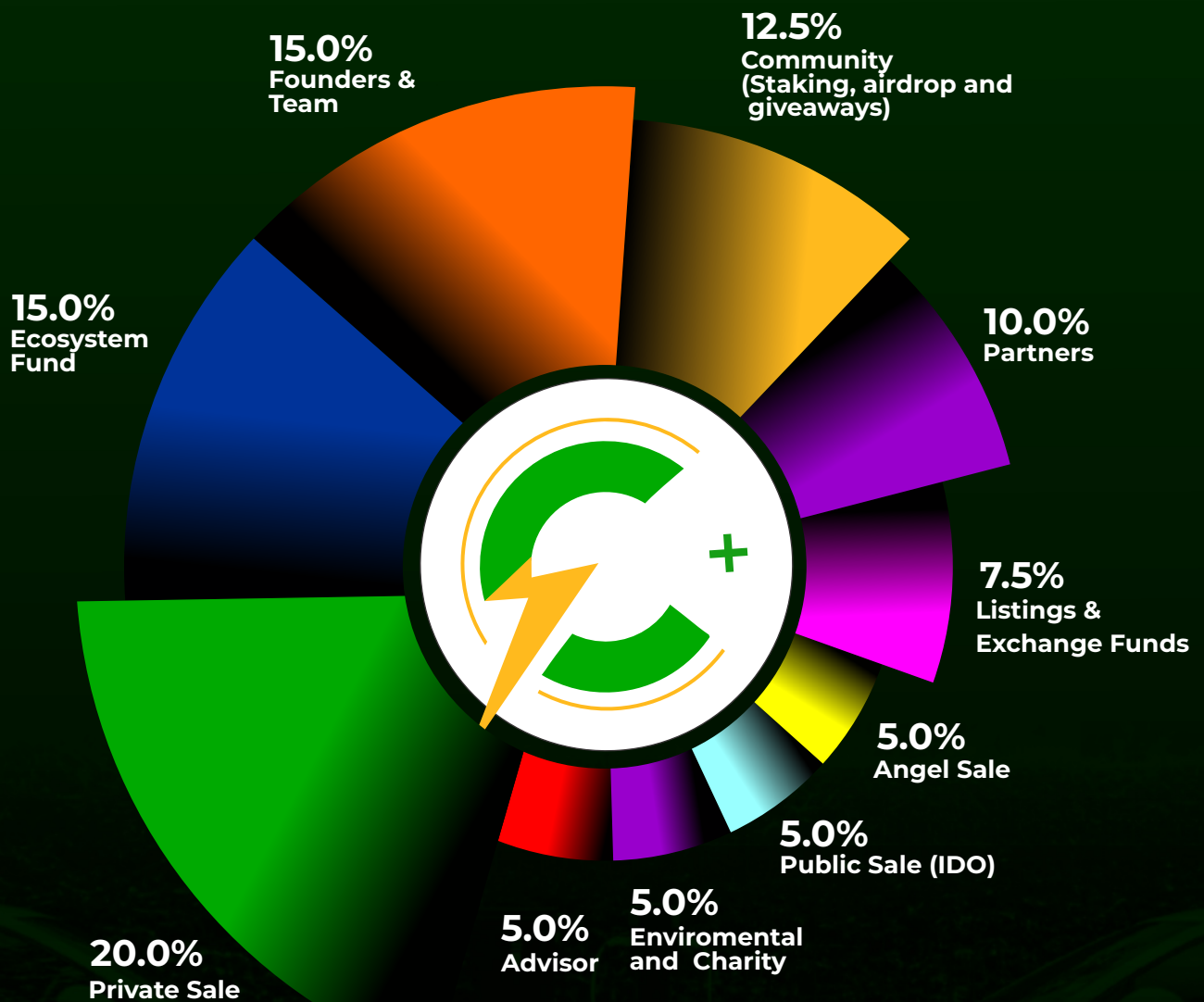
Angel Sale	5.0%
Private Sale	20.0%
Public Sale (IDO)	5.0%
Community (Staking, Airdrop, and Giveaways)	12.5%
Founders & Team	15.0%
Ecosystem Fund	15.0%
Partners	10.0%
Listings & Exchange Funds	7.5%
Environmental & Charity	5.0%
Advisor	5.0%
TOTAL SUPPLY	1,000,000,000

\$1Billion
(Total Supply)

\$CC
TOKEN

C-CHARGE TOKENOMICS

A novel feature of the C+Charge token eco-system will be that every time tokens are used to pay for a charge, they will be taken out of circulation, enabling a constant supply of demand in the network. As the number of charging stations grow, the number of tokens taken out of the system will increase, providing organic support.





C-CHARGE

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