

WHITEPAPER V1.2

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Strides Towards A Sustainable Future

Abstract

Sustainability is a concept related to the development of products, goods, and services that involves meeting our present needs without compromising the ability of future generations to fulfill their own needs. Sustainability as a concept recognizes that the environment is an exhaustible resource. Therefore, it is important to use the environment and its resources rationally and protect it for the good of the Earth, our environment, humanity, & all living things.

The global energy system, which is 85% based on fossil fuels, is responsible for over 70% of the greenhouse gas emissions that cause climate change. More than 750 million people lack access to electricity and over 2.6 billion rely on polluting fuels such as wood or charcoal to cook. Reducing greenhouse gas emissions to levels consistent with the Paris Agreement will require a system-wide transformation of the way energy is produced, distributed, stored, and consumed. As the burning of fossil fuels and biomass is a major contributor to air pollution, which causes an estimated 7 million deaths each year, the transition to a low-carbon energy system would have strong co-benefits for human health. Pathways exist to provide universal access to electricity and clean cooking technologies in ways that are compatible with climate goals, while bringing major health and economic benefits to developing countries.

While most people associate it with the environment, sustainability can be explored in various other contexts, including economic development and social responsibility. These contexts include the Earth's carrying capacity, the sustainability of ecosystems, occupations, behavior patterns, and so on.

In a sustainable society, humans live in harmony with the natural environment, conserving resources for their future generations, so that everyone enjoys social justice and a high quality of life.

MNL is focused on delivering quality services, insight and advice that enable our clients to win in the ever changing world of sustainability. In order to do so, MNL is planning to introduce a sustainable cryptocurrency for its platform named as SAO token and the cryptocurrency would be utilized with a sustainable business module of Electric Vehicles. The major benefit of electric vehicles is the contribution that they can make towards improving air quality in towns and cities. With no tailpipe, pure electric cars produce no carbon dioxide emissions when driving. This reduces air pollution considerably.

Put simply, electric vehicles give us clean streets making our towns and cities a better place to be for pedestrians and cyclists. In over a year, just one electric car on the roads can save an average 1.5 million grams of CO₂. That's the equivalent of four return flights from London to Barcelona.

MNL offers a wide range of Chargers portfolio which includes DC chargers, AC chargers, charging site management systems and an EV Charging Mobile App interface for Users.

Our goal is to provide a reliable electric vehicle charging infrastructure that is smarter , efficient and easily accessible. Our innovative solution optimizes both charging effectiveness and energy efficiency.

Introduction to MNL Group of companies

MNL is an organization having its offices across Asia Pacific targeting a sustainable future. MNL Technologies PVT LTD not just promotes the use of electric motorbikes, but also as a part of the sustainability goal, users/owners of our electric motorbike can enjoy our buyback scheme. It is where we will buy back our electric motorbike when it is at the end of the lifespan and the user/owner will get in return SAO Tokens for their future purchases or purchases in our E-Commerce web. Our business structure looks like following:-



About MNL Solutions (Focus on Electric Vehicle Charging Infrastructure) – Singapore

- MNL Solutions has been in the Electrical Engineering and Lighting Consultation field for more than 10 years.
- Throughout the years, we have already been focused in working on turnkey projects that are sustainability focused and the lighting we use in our designs are also green and energy efficient grades.
- In view of the increased EV adoption, we utilized our profession in the electrical infrastructure and provided services to our existing clientele with full EV Charging solution. MNL believes in the facts and the data that entails EV will be the future of mobility and it is also the most sustainable way of transport.
- In line with Singapore's direction in the EV adoption plan, there will be a strong need for efficient and effective EV Charging infrastructure.
- SAO Token is being introduced in line with our policy of sustainability that can act as a loyalty reward program when users use our EV Chargers.
- MNL will also do fundraising using IDO to improve the EV Charging infrastructure and raise awareness in the importance of sustainability and fund sustainability related projects.
- For more please refer to www.mnlasia.com

About MNL Technologies - *India*

- MNL India, believes that *A Company Is Only As Good As The People It Keeps*
- Our Focus is to Deliver quality services, insight and advice that enable our clients to win in the ever changing world of work
- MNL Technologies, India was established with focus on the Sustainable future of EV in India.
- In order to do that we focus on Setting up of EV Charging Stations and Sale of Electric Motorbikes.
- EV Chargers will be incorporated with Solar Panels to make it more sustainable and energy saving.

About MNL Services - *Singapore*

- Fully integrated manpower services providing Employment & Workforce solutions, Talent Resourcing, Human Resource, HR consultancy to our prestige clients.
- The whole process of hiring / recruiting can sometimes require a lot of time, cost and experience
- That is where our team of experienced recruitment consultants comes in handy where We meticulous vet through our sources and database to bring forward the most suitable and promising candidate
- Our valuable sources of candidates mainly comes from Singapore and various countries like China, Thailand, Myanmar, India, Bangladesh, Vietnam & Malaysia
- We have a system process in place to screen and detail check our sources and pair them to the most suitable job scope and industries so that they can maximise their potential
- We value of our client's trust in us and therefore we are committed with passion to provide the most efficient services and the utmost reliability to resolve any issues arise before and after sales service

About MNL Financial Company - *India*

- MNL Financial Company will provide financial support for the purchase of our Electric Motorcycle , EV Chargers and solar set up india
- To work with like-minded partners to build a sustainable and resilient future for ourselves and generations to come
Vision : To work with like-minded partners to build a sustainable and resilient future for ourselves and generations to come.
- *Focus : Increased accessibility to our sustainability initiatives for individual and businesses*
- Individuals and Businesses play a crucial role in driving sustainable developments as they bring forth adoption rates on the available sustainable projects. As we are committed to supporting a sustainable future for our society and generation to come, we have launched the MNL Financial Company to extend our sustainable financing offering to our clients.

Team



RCS. Muthu Karuppan

Chief Operating Officer

20+ years of experience in project operations and advanced business planning has assisted MNL to accomplish numerous turn-key projects with efficiency and compliments. Led teams across broad technical, financial and business disciplines. Focused teams on business objectives and tracked progress to ensure project milestones were completed on time, on budget and with the desired results.

Vairam Nagaraj

Business Development Director

The years of meticulous networking efforts has assist him to acquire and cultivated a significant client base that has brings forth sustainable economic growth for the companies he worked. Accountable for managing profitability with sales exceeding \$20 Million for a period of 8 years while simultaneously increasing brand recognition through efficient operations. Among many skills , he has provided the leadership to the management team to better align the marketing, sales, production and administrative departments to increase efficiency across the board.

Lai Y.W.

Sustainability Director

Successful experience of leading Sustainability initiatives and working in social/environmental impact for more than 10 years. His extensive portfolio includes development of energy management & sustainability strategies for clients, then implement programs to achieve savings goals and targets by specified timelines. Some of the skillsets includes managing energy benchmarking and assessment using Energy Star Portfolio Manager as well as internal software platforms; analyze consumptions metrics to identify opportunities and create plans to sustain energy savings.

Anbazhagan Arasayi

Senior IT Architect

Full stack developer with over 13 years of experience in Software Development and experienced in all stages of Software Development Life Cycle (SDLC) including requirement analysis, design, implementation, integration, testing, deployment and post development maintenance. Oversaw and coordinated technology direction and strategy, process and quality improvement. In his years of experience, he had directed IT teams with his in-depth know-hows in designing, building, implementing, managing, supporting and enhancing key technologies. He is also the architect for MNL's new portfolio management system for our EV Charging infrastructure.

Rani Kagoo Jude Cruz E

Senior Creative & Marketing Manager

His richness in the marketing field has assisted in developing, executing multi-channel marketing strategies to increase brand awareness with generating and nurture leads, and support business development efforts. His direction has proofed in the increased site traffic by 15% year-over-year . The creativity of his has also created and executed individualized social media strategies tailored to each uniqueness in the regional

Raja Saravanan

Senior Blockchain Specialist

His strong understanding of algorithms, data structures, cryptography and data security has consulted multiple companies to achieve blockchain technology, includes both developing on the server-side and front-end.. With him on board with MNL , he has effectively contributed in the smart contract development, launched token sales and ensured security protocol are in place. Among other skills set, he is also experienced in frameworks / favorable protocols like Java, Javascript, Go, Python, C++, PH, HTML, CSS, Linux Bash.

Karupaiah Revathi Palaniyappan

Senior Finance Officer

Over the years of his banking career , he has developed deep insight in business and associated credit in Trade - Trade Finance, Trade Services, Export Agency Finance, and Commodities and Cash Management. He is also active participation in regional monetary reviews and his track record has proven ability to consistently meet or exceed objectives and Quota's. His determined direction has assisted in mitigating significant high risk/ adversely classified exposures.

Bob Lim B.H.

Advisory Team Lead

His library of experiences in M&E both local and in the region has proofed valuable to us going forward our expansion plans. Over the years of his consultation, he has brought forth successful turn-key projects like the Kingsland Data Centre in Singapore, Cambodia Government Duty & Tax DC, Shanghai Think IT (China, Shanghai), etc. We strongly believe that with his guidance , we can achieve greater success in the region.

Gan A.H

Advisory

His down – to – earth approach has made him extra valuable to us for our plans ahead. The foresightedness that he has gained throughout the 30 years of experience with more than 100million dollars' worth of project value both on the ground and on the high hierarchy has avoided numerous potential errors and mistakes. His earnest contribution to our team has given us confidence every step of the way in achieving our goals.



Mission

- To inculcate knowledge exchange with collaboration between individuals, businesses and institutions on all EV-related issues including R&D , manufacturing , enhancing business sustainability and increasing adoption rate.
- To market awareness of EVs to the general public, and to boost its adoption amongst private vehicle owners and business communities
- Looking into partnering with relevant agencies in the creation of a roadmap that will promote the use of EVs

Why Electric Vehicles ?

The Know-Hows of EVs

The capacity of EV batteries is commonly calculated in kilowatt hours (kWh). This is the unit measure of energy stored, which is a product of power supplied (measured in kilowatts) and total time that the power was supplied for (measured in hours). < accessed 25.07.21 , <https://www.engineering.com/story/what-you-need-to-know-about-batteries-for-electric-vehicles> >

For a start, it will give a good understanding of the advantages and limitations of EV's in relation to Internal Combustion Engine (ICE) cars.

- **Plug-in electric vehicles (PEVs):** which can first run entirely on electricity from the battery for a shorter range , then seamlessly switch to a full tank of fuel to recharge the battery when it gets low.

- **Battery Electrics (BEVs):** Runs on electricity only. The larger the size of an EV battery in terms of the kWh, the further the range and the more power the EV motor can provide to drive its wheels.

EV Efficiency - A majority of commercially available EV models are able to attain an energy efficiency of 5km per kWh of energy stored . On average, EVs convert about 80% of the electrical energy from the grid to power at the wheels. This is about 4 times more efficient than ICE vehicles which only convert about 20% of the energy stored in petrol to power at the wheels.

Plug-In Hybrid Electric Vehicle (PHEV) - A plug-in hybrid vehicle is a petrol vehicle with onboard battery (typically 7-10kWh) that can be charged with electricity. It has onboard electric motors which make it possible to drive the vehicle in pure-electric mode for a typical distance of 20-50km. The PHEV has a small ICE used to drive the wheels when the EV battery has depleted or when additional power is required.

PHEV Battery, A PHEV battery generally has a smaller capacity and a shorter range than an EV battery. The time required to fully charge the PHEV battery is usually about 2 -3 hours of AC charging .

Hybrid Vehicles - A hybrid electric vehicle (HEV) does not have an onboard external plug. The power derives partly from a conventional petrol engine and some from an electric motor and small battery pack. All of its energy is generated from petrol combustion. This allows the car to burn less gasoline, achieving better fuel efficiency than a traditional engine that solely uses fuel does.

Rise of Electric Vehicles in India

The electric vehicle industry in India is picking pace with 100% FDI possible, new manufacturing hubs, and increased push to improving charging infrastructure. Federal subsidies and policy favoring deeper discounts for Indian-made electric two-wheelers as well as a boost for localized ACC battery storage production are other growth drivers for the Indian EV industry.

The global automotive industry is undergoing a paradigm shift at present in trying to switch to alternative/less energy intensive options. India, too, is investing in this electric mobility shift.

The burden of oil imports, rising pollution, and as well as international commitments to combat global climate change are among key factors motivating India's recent policies to speed up the transition to e-mobility.

Electric vehicle industry in India: Growth targets

The Indian automotive industry is the fifth largest in the world and is slated to be the third largest by 2030. Catering to a vast domestic market, reliance on the conventional modes of fuel intensive mobility will not be sustainable. In an effort to address this, federal policymakers are developing a mobility option that is "Shared, Connected, and Electric" and have projected an ambitious target of achieving 100 percent electrification by 2030.

By making the shift towards electric vehicles (EVs), India stands to benefit on many fronts: it has a relative abundance of renewable energy resources and availability of skilled manpower in the technology and manufacturing sectors.

According to an independent study by CEEW Centre for Energy Finance (CEEW-CEF), the EV market in India will be a US\$206 billion opportunity by 2030 if India maintains steady progress to meet its ambitious 2030 target. This would require a cumulative investment of over US\$180 billion in vehicle production and charging infrastructure.

Another report by India Energy Storage Alliance (IESA) projects that the Indian EV market will grow at a CAGR of 36 percent till 2026. The EV battery market is also projected to grow at a CAGR of 30 percent during the same period.

Existing EV ecosystem in India and investment outlook

Regardless of the country's ambitious targets, India's EV space is at a nascent stage. However, looking at it differently – India offers the world's largest untapped market, especially in the two-wheeler segment. 100 percent foreign direct investment is allowed in this sector under the automatic route.

The federal government is also prioritizing the shift towards clean mobility, and recent moves to amend the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India (FAME) II scheme to make electric two-wheelers more affordable, is a case in point.

The government has also rolled out a Production-Linked Incentive Scheme (PLI) for ACC Battery Storage Manufacturing, which will incentivize the domestic production of such batteries and reduce the dependence on imports. This will support the EV industry with the requisite infrastructure and will significantly cause a reduction in cost of EVs. Many leading battery producers like Amara Raja Batteries, are picking cue from these incentives to orient new investments into green technologies, including in lithium-ion batteries.

Responding to the opportunity that India's EV industry presents, leading players like OLA Electric Mobility Pvt, Ather Energy, and Mahindra Electrics are rapidly growing their market presence. Moreover, certain states like Karnataka and Tamil Nadu are rolling out innovative and timely investor-friendly policies besides building necessary infrastructure.

Recently, the American electric vehicle and clean energy company Tesla Inc. marked its entry into India by incorporating its subsidiary, Tesla India Motors and Energy Pvt Ltd, in Bengaluru.

In February 2021, Ather Energy, India's first intelligent EV manufacturer moved its US\$86.5 million factory from Bengaluru (Karnataka) to Hosur (Tamil Nadu). Ather Energy's factory is said to have an annual production capacity of 0.11 million two-wheelers.

In March 2021, Ola Electric, the subsidiary of the unicorn Indian ride-hailing start-up, also announced that it would be setting up the world's largest electric scooter plant in Hosur (which is a two and a half-hour drive from Bengaluru) over the next 12 weeks, at a cost of US\$330 million, and aiming to produce 2 million units a year. By 2022, Ola Electric wants to scale up production to pump out 10 million vehicles annually or 15 percent of the world's e-scooters.

There have also been positive developments in the expansion of charging infrastructure across the country – states like Andhra Pradesh, Uttar Pradesh, Bihar, and Telangana are setting impressive targets for the deployment of public charging infrastructure to increase uptake of electric vehicles in the country.

Recently, Sterling and Wilson Pvt Ltd (SWPL), India's leading engineering, procurement, and construction company announced its entry into the electric mobility segment in India. It has signed a 50-50 joint venture with Enel X, to be incorporated on April 1, 2021, to launch and create innovative charging infrastructure in India.

The key reasons why these states are doing better than others are local fiscal sops, better logistics, an investor-friendly government policy, business facilitation through easier access to authorities, supply chain connectivity, and the availability of suitable land.

Karnataka was the first state to introduce a comprehensive EV policy and has emerged as a hotspot for EV businesses in India, both in EV and EV ancillary manufacturing as well as R&D segments. Tamil Nadu is also leaping forward at a commendable pace, owing to its supply ecosystem, larger land parcel, proximity to ports, and proactive investor support through administrative portals like Guidance Tamil Nadu.

Nevertheless, while growth in the EV industry is on an upward tick, it has much ground to cover to be able to realize the government's ambitious 2030 target. The COVID-19 pandemic not only slowed the industry's progress, but also dampened overall market demand.

Still, market sentiment has retained positivity in some segments. In FY 2020, EV sales for two-wheelers in India increased by 21 percent. For EV buses, the sales for the same period increased by 50 percent. In contrast, the market for electric cars remained grim, registering a five percent decline. As for total EV sales, after suffering an initial setback in 2020, sales appear to be slowly picking up. In January 2021, 15,910 units of EVs were sold in India, and out of these, the maximum units were sold in Uttar Pradesh, followed by Bihar and Delhi.

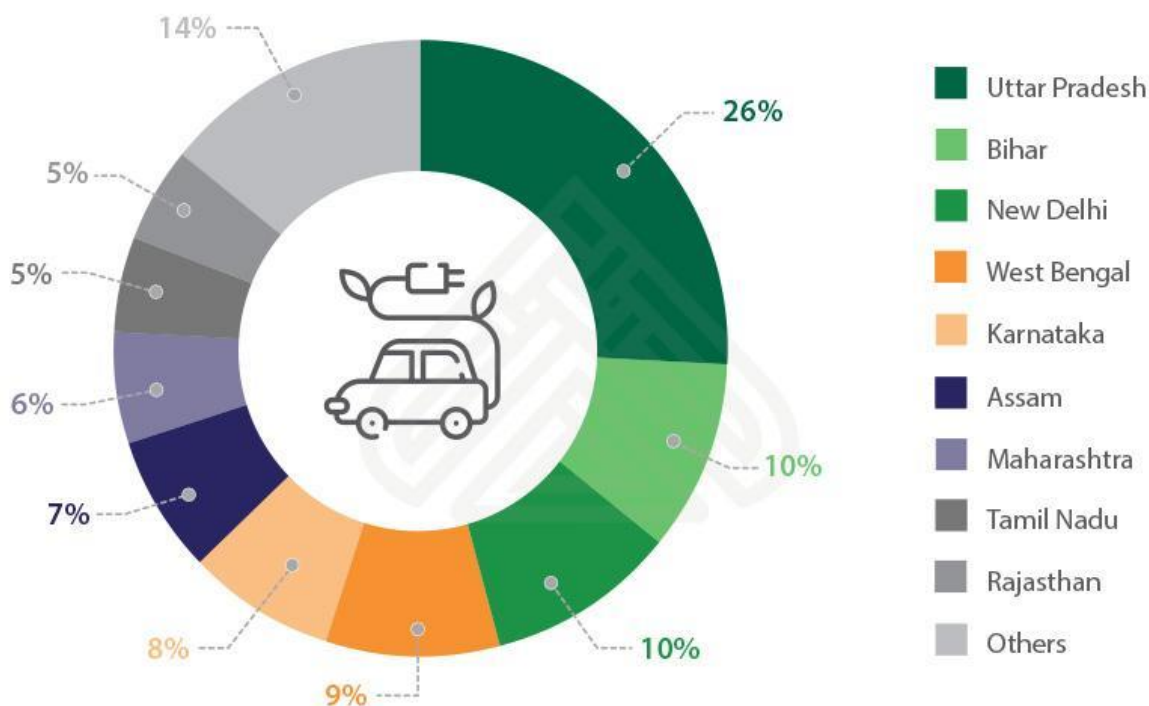
EV Sales for Fiscal Year Ending March 2020				
Segment		FY 2019	FY 2020	Change in percentage
	Cars	3,600	3,400	-5
	Two wheelers	126,000	152,000	21
	Buses	400	600	50

Source: Quartz/ SMEV

* These figures do not account for e-rickshaws, which are largely under the unorganized sector with a reported sale of 90,000 units.

Graphic© Asia Briefing Ltd.

Regional Registered EV Sales Jan-Dec 2020



Source: Vahan Dashboard, JMK Research

Graphic© Asia Briefing Ltd.

India's EV market: Growth projections and government policy

Projections

In April 2019, Niti Aayog, the federal think tank, published a report titled “India’s Electric Mobility Transformation”, which pegs EV sales penetration in India at 70 percent for commercial cars, 30 percent for private cars, 40 percent for buses, and 80 percent for two- and three- wheelers by 2030. These targets, if achieved, could lead to a net reduction of 14 exajoules of energy and 846 million tons of CO2 emissions over the deployed vehicles’ lifetime. Electric vehicles sold until 2030 can cumulatively save 474 million tons of oil equivalent over their lifetime, worth US\$207.33 billion.

This will help India fulfil its global commitments to lower carbon emissions and increase use of cleaner sources of energy and transportation as required by the Nationally Determined Contributions (NDCs) under the United Nations Framework Convention on Climate Change (UNFCCC) and EV30@30.

Policy measures

Several fiscal and non-fiscal measures have been put in place to facilitate the adoption of electric mobility. They are as follows:

National Electric Mobility Mission Plan 2020 (NEMMP): It was launched in 2013 by the Department of Heavy Industry (DHI) as a roadmap for the faster manufacture and adoption of EVs in India.

FAME Phase I: As part of the NEMMP 2020, the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India (FAME India) Scheme was notified in April 2015, to promote the manufacture of electric and hybrid vehicle technology. It has mainly focused on four aspects – demand creation, technology platform, pilot projects, and charging infrastructure. For demand creation, incentives have mainly been disbursed in the form of reduced purchase prices.

FAME Phase II: Launched in 2019 for a period of three years, this scheme has an outlay of US\$1.36 billion to be used for upfront incentives on the purchase of EVs as well as supporting the development of charging infrastructure. FICCI has asked for continuation of FAME II till 2025, along with short-term booster incentives to enhance demand.

Amendments to FAME Phase II: On June 11, 2021, the Ministry of Heavy Industry announced further amendments to the FAME II scheme to give a boost to EV demand among consumers. Under the revised policy, the subsidy per electric two-wheeler (Indian-made), which is linked to the battery size, has been increased to INR 15,000 (US\$204.60) per Kilowatt-hour (KWh) from INR 10,000 (US\$136.40) KWh. Furthermore, electric two-wheeler manufacturers can now give discounts of up to 40 percent to consumers, which is a significant raise from the previous cap of 20 percent. The eligibility criteria for these electric two-wheelers to qualify for subsidy under the FAME II scheme include a minimum range of 80 km on single charge and a minimum top speed of 40 km per hour. These incentives are expected to significantly lower the purchase price and lift buyer sentiment, creating a spur in market demand. The amendments in the policy have been hailed by industry stakeholders who are now expecting the EV two-wheeler industry to clock sales of over six million units by 2025. Yet, according to a recent CRISIL report, 95 percent of the e-scooters in India are not eligible for the FAME II incentive scheme, as they fail to meet the eligibility criteria.

Ministry of Power: It has clarified that charging EVs is considered a service, which means that operating EV charging stations will not require a license. It has also issued a policy on charging infrastructure to enable faster adoption of EVs.

Ministry of Road Transport and Highways: It has announced that both commercial as well as private battery-operated vehicles will be issued green license plates. It has also notified that all battery operated, ethanol-powered, and methanol-powered transport vehicles will be exempted from the commercial permit requirement.

Department of Science and Technology: It has launched a grand challenge for developing the Indian Standards for Electric Vehicle Charging Infrastructure.

Niti Aayog: The National Mission on Transformative Mobility and Battery Storage has been approved by the cabinet, and the inter-ministerial steering committee of the Mission will be chaired by the CEO of Niti Aayog. The Mission aims to create a Phased Manufacturing Program (PMP) for five years till 2024, to support setting up large-scale, export-competitive integrated batteries and cell-manufacturing mega plants in India, as well as localizing production across the entire electric vehicle value chain.

Rise of Electric Vehicles in Singapore

Electric vehicles (EVs) made up 1.3 percent of all new electric car, taxi and bus registrations between January and June this year, up from just 0.3 percent of vehicle registrations for the whole of 2020.

Figures from the Land Transport Authority show there were 1,549 electric cars registered in Singapore as at the end of June, making up about 0.2 per cent of the 640,247 cars on the road in Singapore. This is up from the 1,217 registered electric cars at the end of last year.

The EV Early Adoption Incentive and the enhanced Vehicular Emissions Scheme launched earlier this year helped to “narrow the upfront cost between electric cars and internal combustion engine cars”. With the launch of these schemes, as well as lower battery costs and more EV models from car makers, we expect that this number will continue to grow in the coming years.

The ministry of Transport reiterated the Government’s aim of having 60,000 charging points islandwide by 2030, up from about 2,000 currently. Also, noted there would be another 600 charging points at 200 public car parks by next year, through a tender on EV charger deployment.

A new grant that offsets half the cost of certain electric vehicle (EV) charger components will be made available to condominiums and private apartments looking to install such chargers.

The Electric Vehicle Common Charger Grant will co-fund the installation costs of 2,000 chargers at such homes to incentivise early adoption of electric vehicles, the Land Transport Authority (LTA) said on Monday (Jul 19).

Owners of the chargers, whether an EV charging operator or owners of the residence, can apply for the grant to cover three upfront costs: The charging system, the licensed electrical worker fees and cabling and installation costs (capped at S\$1,000). The grant will co-fund half of these costs, with an overall cap of S\$4,000 for each charger.

Only chargers with smart functions that allow them to monitor and react to energy consumption data through adjustments to the rate of charging will be co-funded.

Overall, the combined efforts from Government and the private sector to improve coverage of the national charging point network will be able to meet EV charging needs in Singapore.

SAO Token + MNL EV Chargers resolves Challenges faced by EV industries

Charging time. Using a standard home charger, it takes 10-20 hours to charge a typical EV to 80%. Even with an upgraded charger (3-7kW power), this could still take up to 6-8 hours. MNL EV Charger range covers from 3 – 22kW AC and 50 – 75kW DC Chargers. With the healthy range, charge time can be dramatically shortened and with the SAO Token adoption, we will give priority load to SAO Token users.

Availability of charging infrastructure EV owners can experience “range anxiety,” the fear that the car will run out of power before reaching a suitable charging station.

One of the MNL’s goal is to increase the reach of our EV infrastructure. With the IDO of SAO Token, we will increase the EV set up from 10 new chargers set up per month to 40 new chargers set up per month. It is also part of our SAO Token roadmap to increase the charging infrastructure so as to meet the region’s sustainability goals that were set by the government.

EV Adoption rate

There are substantial technical, social, and economic barriers to widespread adoption of electric vehicles, including vehicle costs, lower driving ranges, long charging times, and the need for charging infrastructure

With the creation of the SAO Token that is in direction to promote sustainability, it will in-turn increase the awareness of sustainable transportation – Electric Vehicles. SAO token will also assist in the electric vehicle cost by giving preferential rates if SAO tokens are used. With the IDO of SAO Token, the funds raised will assist in expanding the charging infrastructure across the region. With all this benefits and build plans in mind, EV adoption rate will definitely be on the rise in the coming years.

Power Grid < Demand Electricity grid is especially heavily loaded in the morning. The increase in electric vehicles (EV’s) on the road means an increase in the demand for power. Upgrading the electrical infrastructure will be costly and requires huge investments. MNL EV Chargers have a smart load balancing function that can spread the peak load over time, so that all stakeholders in the energy chain can be facilitated at one time. SAO Token is then rewarded to the user when they charge their EVs during non -peak periods so that it can also help ease the power grid stress on the loads.

SAO TOKEN introduction as an Utility Token

In our solution, cryptocurrencies are called "SAO Token. All SAO tokens will initially be released on Ethereum blockchain with the ERC20 protocol therefore available as a cryptocurrency token. Each SAO Token's value would be based on the demand and supply algorithm.

Our implementation has the following advantages over other cryptocurrencies:

- SAO token are available on the Ethereum blockchain rather than an underdeveloped / slightly tested blockchain or within closed software that uses centralized, confidential information.
- SAO Token can be used as Bitcoins or Ethereum, i.e. in a p2p, pseudo anonymous, decentralized, cryptographic protected environment.
- SAO Token can be integrated with merchants, exchanges, and wallets as easily as Bitcoin or another other cryptocurrencies can be integrated.
- SAO Token Limited uses a simple but effective method of Proof of Work that greatly reduces our risk as a stock manager.

Users can purchase SAO Token from it's official website or registered exchanges to (our web wallet). SAO Token as a way to invest and withdraw. Users can operate and maintain Other exchanges, wallets, and brokers are encouraged to contact us about merging the SAO Token as a representative of the traditional fiat payment methods.



Total Supply : 50,000,000,000 Tokens

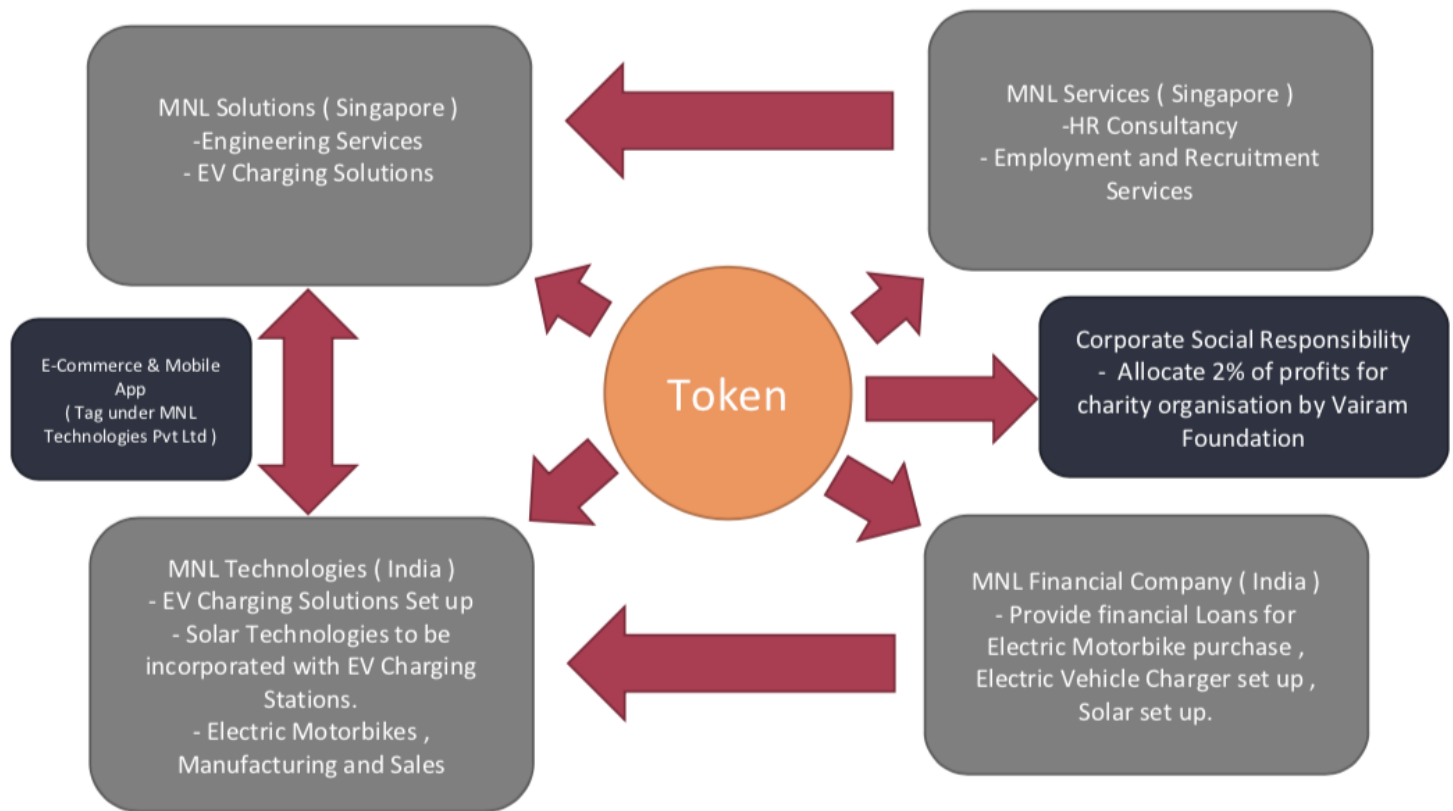
1. (08%) – Seed Funding / Private Sale (Lockup for 6 months, for next 6 months each month 16.66 % of investor holding will be unlocked)
2. (20%) – IDO Launch
3. (12%) – Teams (Lockup for 2 years , each month 8.33% of team holding will be unlocked)

4. (16%) – Infrastructure Set Up (20% unlock at TGE and the linear lockup every quarter for next 2 years , From the remaining token each quarter 12.5% token will be released)
5. (10%) – Marketing Efforts / PR (Gradual unlock for a year , each month 8.33% will be unlocked)
6. (10%) – Rewards/Discount/Airdrop
7. (02%) – Advisor (Lockup for 1 years , each month 8.33% will be unlocked)
8. (05%) – Projects Set Up
9. (03%) - Charity & Social Responsibility
10. (14%) – Liquidity



SAO Token usage.

Token Disbursement via Different MNL Ventures



Problem of the petrol / diesel vehicles

The issue surrounding diesel and petrol engine pollution is very common. For many years we were told diesel engines pollute less; but today, we blame diesel engines for polluting more. So who is right and who is wrong in this discussion? Between the diesel and petrol engines, which one pollutes the most? The answer to this question is a little complex but we'll try our best to help you understand.

Diesel engines emit less CO₂ and greenhouse gases than petrol engines. This happens because of the particular type of fuel and the internal efficiency of the diesel engine. More specifically, the fuel used in diesel engines has a higher compression ratio than petrol and it also performs better than petrol engines.

While diesel engines are meant to be more efficient than petrol engines, diesel cars have received a tremendous amount of bad press. They are said to release toxic gases such as noxious pollutants which are linked to premature deaths. With over half our cars in Europe being Diesel this is extremely alarming.

In 2015 the Volkswagen scandal occurred. The car company was found to be cheating car emissions tests in America. Their vehicles were emitting up to forty times more NO_x than their lab 'testing' showed. Once this was revealed their stock prices fell by a third in a few days. They lost the trust of their customers.

Volkswagen's marketing stated that diesel engines emit less carbon dioxide than petrol engines. They painted their vehicles to be environmentally friendly.

While, yes, their vehicles may emit less carbon dioxide. Their brochures forgot to mention that their cars also emit high levels of particulates which have been proven to increase the risk of breathing problems, cancers and heart attacks for those breathing in the emissions.

In essence, they were 'green washing,' deceptively marketing a product showing it to be sustainable.

Incentives to increase EV adoptions across our target markets.

In Singapore

Singapore's forward ambition and a part of the Green Plan will be to phase out ICE vehicles and to have all vehicles on the road run on cleaner energy by 2040. The government announced a wide range of measures for Private Vehicles, Commercial Vehicles, Charging Infrastructure and planning to accelerate the adoption of EVs.

Nation-wide EV charging network

The government's goal is to aim for upwards of 60,000 EV chargers (comprising 40,000 in public car parks and 20,000 in private premises) to be deployed by 2030. To put these numbers into context, there are only about 1,800 public EV chargers as of December 2020 so Singapore's EV charging infrastructure will undergo a massive 30-fold increase within the next decade.

EV-Ready Towns - By 2025, 8 towns will have EV Chargers deployed for public use . EV charger deployment will also be planned in other towns, so that every town in Singapore will eventually be EV-ready by the 2030s.

EV Common Charger Grant (ECCG)

This grant was introduced for existing non-landed private residences to kickstart the expansion of shared charging infrastructure. The ECCG will co-fund installation of 2,000 chargers between July 2021 and December 2023, subject to a cap.

National EV Centre (NEVC)- A newly-formed NEVC will spearhead the drive to promote wider EV adoption in line with Singapore's vision for all vehicles to run on cleaner energy by 2040. In addition to planning for the expansion of the nationwide EV charging infrastructure, NEVC will also lead efforts to review EV regulations and standards and develop a robust EV ecosystem in Singapore.

Special Road Tax rate and early adoption rate - Owners who register early on fully electric cars will receive a rebate of 45% off the Additional Registration Fees (ARF). Additional incentives like a reduction of up to 34% in road tax for EVs in the 90-230kW bracket will be given to EV users.

In Malaysia

EV incentives are being structured with plug-in hybrid (PHEV) in mind, with the consideration of them being a necessary transition towards full battery EVs down the road. As such, PHEV-specific incentives will also be introduced. These include tax exemption for qualified CKD models, with 100% exemption being given until 2022, 75% exemption from 2023 to 2025, and 50% exemption from 2026 to 2030.

The plan calls for the establishment of a national target of having 7,000 AC public charging points and 500 DC charging points, with the government leading by example. The proposal calls for government funding to be derived for 2,000 AC and 200 DC charging points out of this total in the immediate phase.

Buses and motorcycles are also set to feature in the move towards electrification, with plans to establish an e-bus central procurement agency, offering subscriptions of these to ministries and state governments. This will have a revolving fund of RM450 million for competitive leasing as well as a RM100 million annual fund. Support will also be given to local manufacturing of EV buses.

In Indonesia

The minister aimed to start the mass production of developed EV prototypes by 2020. Moreover, Vice President Kalla stated that EV owners could be granted reduced value-added tax and import duties and Minister of Industry Hartarto plans a quota of 20% EVs sales by 2025, including HEVs, PHEVs, BEVs, and reportedly also FCEVs (Tempo, 2017; Jakarta Post, 2017a). Minister of Energy and Mineral Resources Jonan has proposed that Indonesia should prepare a system to allow BEV drivers to exchange empty batteries against fully charged ones at existing filling stations (Jakarta Post, 2017b).

In Thailand

Thailand has promoted the local production of eco-cars since 2007. To further the domestic production of such eco-cars, the Thai Board of Investment (BOI) granted several incentives to both producers and consumers under the condition that investors agree to production target figures of 100,000 units, which had to be reached after a certain period of operation. PHEV and BEV bus investment projects are eligible for corporate income tax exemption for three years and import tariff exemptions on production machinery. As in the case of BEVs, production beyond the first EV core component entitles additional years of tax exemption to a maximum of six years.

In India

India plans to offer \$4.6 billion in incentives to companies setting up advanced battery manufacturing facilities as it seeks to promote the use of electric vehicles and cut down its dependence on oil.

The government aims at 10% of newly registered vehicles in its major cities to be electric ones by 2025. It also targets to have around 1,500 charging stations in Mumbai itself by 2025 along with converting 15% of MSRTC buses to electric. Maharashtra has announced extensive incentivization for setting up charging stations. The various incentives will include giving incentive of ₹5000 per kWh of battery and the maximum incentive for electric two wheelers is ₹10,000 and ₹30,000 for electric three wheelers.

MNL Use Cases for utilization of EV with crypto rewards

The Electric Vehicle Charging Infrastructure Market size is expected to be worth around US\$ 150.20 billion by 2030, according to a new report by Vision Research Reports.




The significant market growth is primarily due to the rising number of initiatives undertaken by both public as well as private sectors to encourage the population to switch to EVs. As a result, the demand for EV charging infrastructure is expected to grow significantly. For instance, in the U.S., the Washington State Department of Transportation has partnered with the Oregon Department of Transportation to construct the West Coast Electric Highway (WCEH) that consists of 57 EV charging stations across Oregon and Washington. Similarly, many other governments are jointly developing intra-continental networks of highway charging stations.

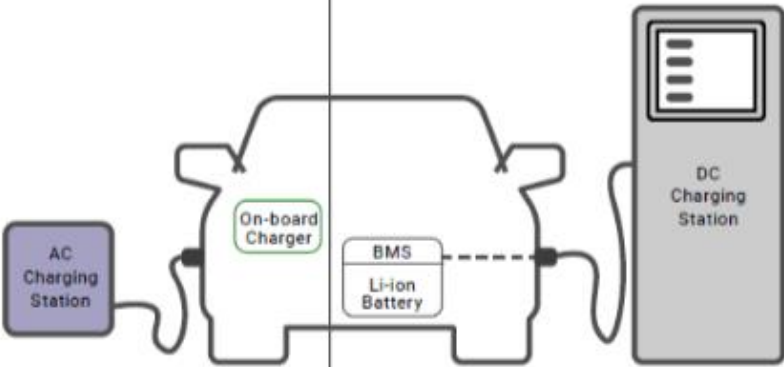
The rising levels of carbon emissions and other harmful gases stemming from transportation have triggered the necessity of adopting EVs. As a result, the demand for an EV charging infrastructure among commercial and residential applications is rising. The technological progress of both EV charging software and hardware is expected to change the way EV owners use and benefit from EV charging applications. Technologies, such as Smartcar API and charging networks, precisely determine an EV's charge time even before the car driver plugs the car into a station.

MNL Integrated Electric Vehicle Charging Solution

EV Chargers

EVs have battery packs that can be recharged by plugging into the electricity grid. EV charging is efficient, convenient, and cost-effective. You can recharge EVs using a charging station, also known as Electric Vehicle Supply Equipment (EVSE). The EVSE communicates with the EV Charger to ensure that the maximum charging power is within safe limits of both the EV and the EVSE.

AC Charging	DC Charging	
		
TYPE 2	CCS COMBO 2	CHADEMO

AC vs DC Charging	
Alternating Current (AC)	Direct Current (DC)
	
While every EV needs an onboard charger, size constraints reduce charge.	High voltage DC chargers can take a lot of power and feed directly to the battery.

ALTERNATING CURRENT (AC) CHARGING

When the EV is connected via an AC charging station, an on-board converter on the EV will do its job to convert the AC supply into DC so that the EV battery can be charged. Typically for AC Chargers, it will take a few hours depending on the power output rating of the on-board EV charger and the original state-of-charge of the battery.

Type	Power Rating (kW)	Estimated Range	Single Phase (230v) Supply	Three Phase (400V)
AC	3.5	18KM	16 A	-
	7.7	37 KM	32 A	-
	11	55 KM	-	16A
	22	110 KM	-	32 A
	43	215 KM	-	63 A

MNL EV Chargers Capabilities

All Round Solutions for EV Charging Connectivity . We can design and custom various solutions that covers -

Commercial fleet EV charging

- Commercial building
- Residential locations.

Categories we offer

- Fast Charging (DC Charger)
- Our DC Charger solution is best for highways & gas stations where fast charge is required. - Commercial & Residential

- Our wide range of AC / DC Charger solutions will be able to meet the different demands required at the commercial and residential level.

- Software and APP control

- Our software management system is able to track and trace all of our changing station's activity and conduct wireless updating. APP control is also available giving the user the platform to perform the charging from our stations and real- time insights on the usage.

- Services

- We have a team of certified installers and LEWs to conduct assessment on your site, carry out the installation work and provide 24/7 support & maintenance.

MNL , your preferred EV Charger solution provider

Hardware Support

- Full range of AC & DC EV Chargers

- Customizable Solutions with flexibility on the design interface. - Smart Charging that allows monitoring and remote access.

Software & App Support

- User friendly interface that provides easy payment transactions
- Able to generate Full Insight report on the charging trend and behaviour - Full Control over the charging stations and their power consumption

Manpower & Service Support

- On site support with installation and maintenance services. - Remote technical support
- Certified LEW and Installation Support

MNL EV SOFTWARE & APP

Our EV Charger App allows our Partners and User to interact freely with the EV Charging Stations available, providing an easy-to-use charging experience.

Our Software is focused on the ease-of-use solutions that pay for themselves. This allows our Partners to manage the charging network easily and earn additional revenue by adjustment of the charging fees.

Intuitive User Friendly Interface that apprehend, command, and optimize the EV charging station network

Advance Insight Reports

- Detail graphs and trend reports can be generated for making critical decisions.
- Monetary and non-monetary balances of services
- Real Time Analytics reports that helps user to efficiently and effectively operate individual EV Charging Stations

Remote Access

- Overview control on all the connected EV charging stations
- Access via web browser or start and stop charging sessions using our MNL EV Charger APP. - Monitor and Transacts every individual Chargers for location tracking and availability

Ease of Payment

- Customizable and Adjustable charging fees to optimize the rate of use.
- Multiple payment channels with different modes of charging for different scenarios. - Automated invoicing and billing for users

Infrastructure Management

- Intuitive user friendly interface that provides smart AI approach in managing a comprehensive EV charging stations
- Ease of use Dashboards with real-time data and Google mapping on the App
- Our MNL EV Charging App also has a charging session management system that provides easy access to our EV Charging stations.

MNL EV Charger App

The MNL EV Charger mobile app is designed for both users and partners of our charging station.

This app supports the configuration of MNL charging stations and enables a number of functions, including the following

- Pairing your charging station to mobile phones and tablets via Bluetooth
- Configuring Plug & Charge (Autostart) function
- Connecting your charging station to your local Wi-Fi network to enable communication between your charging station and your charging management service provider

Find Us on Google Play or Apple App Store ! Search “ MNL EV Charger “

Solar Panel Solution

We offer industrial and commercial solutions with a variety of solar related products and services that will guarantee attractive ROIs. From solar panels, solar inverter controllers to complete solar systems for remote areas, we will be more than willing to assist

Capabilities

- Custom Design Solar Solution (Commercial & Residential) Solar PV Panels
- Charge Controllers & Inverters
- Solar related Batteries
- Solar Street Lights and Solar integrated EV Charging Stations.

Integrated Solar Systems- We are able to assist in providing fully integrated solar power systems that are wired and assembled with solar power supplies by us, ready to power up your loads using from the sun.

Solar Panels (PVs)- Supply and Install Solar panels that convert sunlight directly to electricity. Our high QC Standards solar panels are crucial in providing longer lifespan and better performance.

Solar Charge Controller - Solar charge controllers are at the heart of every solar power system. They regulate the charging of batteries, prevent damage to components and extend the life of solar systems.

Solar Batteries- We provide high quality Solar related Batteries that are maintenance-free , with focus designed for continuous solar usage and cyclic charging.

Solar Inverters - We use International Certified AC inverters to convert the DC from the batteries to the standard household AC voltage to allow connection of more commonly available AC equipment.

Solar Integration with EV Chargers - Our aim is to tap the abundantly available solar energy and use its application as a power source for Charging Electric Vehicles. This option will provide sustainability and for combating the hazards of environmental pollution.

Solar Integration with EV Chargers

Electric vehicles have been rapidly gaining popularity and with the EV adoption on the rise, EV Charging Stations will be a necessity in the coming years. Our Solar Panels will act as an enabler with our EV Chargers and this integration of a solar panel system and EV charging station will bring forth several advantages and provides a cost-effective way to charge and make use of your solar energy.

Plans moving forward

Solar Panel charging installations for Electric Vehicles

- Providing Mobile Solar Charging systems that includes rooftop solar panels used for charging the batteries of an electric Vehicle.
- Fixed Solar powered charging installation where by a ground based installation (grid based or off-grid) that includes direct charging at the EV charging stations. (Commercial , Public or Residential set up)

The Components involved

- *Solar PV Panels:* A photovoltaic (PV) panel harnesses the solar radiation into electrical energy and that will be supplied to the electric vehicle batteries. In the case of fast EV charging stations (DC Chargers) , a larger array of (> 300) of electrically connected solar panels would be required in order to generate the required power to charge electric cars in a day.
Other crucial factors like the angle of the solar panel will be a deciding factor on the output efficiency of these panels. To mitigate this issue , we can propose the solar panels to be attached with a moveable, motor-controlled solar trackers. And based on the data inputs collected from the microcontrollers used, these motor-run trackers move the solar panels axis to receive maximum sunlight any given time in a day.
- *Microcontrollers:* The microcontrollers used in a typical solar PV charging system will be required to perform and ensure maximum efficiency of solar power generation through the MPPT controller and to store the extra energy generated from the solar PV panels into storage battery cells. The microcontrollers that we use are international certified and accredited that ensures high performance.
- *Options to install Motor to control Solar Panel Axis :* A bi-directional motor can be used to control the solar trackers so that the panels are tilted at an angle where they receive the maximum sunlight at any given time in a day.
- *MPPT with DC-DC converter :* An electronic DC-DC converter will help convert the high power generated from solar panels to the required EV battery voltage that is safe for charging. These DC-DC converters use Maximum Power Point Tracking (MPPT) to support the PV panels to operate at the maximum power. Generally, the maximum Power obtained from the solar radiations is inherently non-uniform in nature and in some occasions varies with temperature and time in a particular day. That is where the DC-DC converter will offer an interfacing between the photovoltaic panel and the load to achieve maximum power transfer without loss. We will install the MPPT controller connecting to the output of the solar PV panel.
- *Back end management Interface between the EV battery systems and charging system:* We will have 2 separate software management systems to monitor the solar battery via (BMS) system and using the MNL Backend software to communicate with the EV Charger. With this monitoring software in placed, we can ensure an optimal charging at all times during use.
- *User Interface:* We will make full use of the MNL EV Charging App to give the necessary information and access to the user in using the EV Chargers.

Implementation Advantages

- A path for green consumerism - Future Sustainability has always been MNL's vision. Looking at the recyclability solar panel modules can be recycled and the longer lifespan of 20 years, it can ensure sustainability for a longer run and reduces the environmental impacts with Zero Carbon Footprint
- Solar panels ROI are getting more sound as it can help significantly in saving electricity costs through a controlled charging schedule. Prices of solar installations have reduced considerably over time, encouraging more people to invest in one of the most popular forms of renewable energy.
- Providing Mobile Solar Charging systems = Convenience Charging from solar power offers suitability and flexibility solutions for rural , remote areas is off-grid. Besides, if you don't have to worry about grid outages, adding a solar battery to store energy offers full flexibility.
- Solar panels installed on the property saves energy consumption and promotes sustainability. Pushing this focus to a greater height , the solar panels can also assist in the charging of EVs without placing additional demand on the grid. The energy stored in the batteries can also reduce the pressure on the electricity power infrastructure from the grid during times of peak demand.

- Two -way charging advantages - In one way , the EVs can be used to charge at public or home, eliminating the need for non-renewable-based power directly from the grid. Secondly , EV Users may not need to pay for the initial electricity (with roof-top solar panels) to charge, and they don't have to buy as much from the utility when the solar panels aren't being energized.

Roadmap

Conclusion

With the ICO raised , we target to install 5 EV Charging stations with Solar Panels in the state of Chennai and we will set up a factory to assemble with production of the Electric Motorbikes. The crypto tokens will be used as a mode of payment, loyalty program (in ecommerce), rewards program, Referral Initiatives and to earn discounts. In order to achieve sustainability As One.

We all have a part to play in achieving sustainability for earth as one united people.

- Focus : Utility Token to be used for all sustainable related services and technologies.
- Vision : To increase adoption rate and promote all sustainable related services and technologies.
- Target : To be the preferred payment mode for all sustainable related services and technologies

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