

2025 Integrated Annual Report

LED

Our Journey in Electric Micromobility



14 years providing safe and compliant, operational turnkey systems

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From the CEO's Desk



Dear Valued Stakeholders and Partners,

For over 14 years, Leo Electric has been dedicated to a single mission: electrifying micromobility for the people, the public sector, and private enterprises. From supporting critical national projects with custom-built electric solutions to navigating complex urban infrastructure, our commitment has always been to drive sustainable, practical change.

Today, we are taking a significant step forward. In 2025, we proudly debuted the Leo Electric Consortium, where we have united leaders in solar energy, battery storage and climate finance. This allows us to offer not just vehicles, but full turnkey electrification ecosystems—making adoption easier and more impactful for our partners worldwide.

We are strategically extending this integrated approach to capitalize on new opportunities, such as agricultural electrification. Through the consortium, we provide farmers with solar-powered charging, energy storage, and tailored electric utility vehicles—enhancing productivity, reducing waste, and enabling clean, cost-effective operations. This expansion is a natural extension of our core expertise, allowing us to apply our mission to sectors where electrification can drive immediate and meaningful impact.

Yet, our core remains unchanged: delivering reliable, innovative, and purpose-built electric mobility solutions where they are needed most. We remain focused on our founding goal—powering movement for people, businesses, and governments—now with a stronger, more integrated approach.

With gratitude and resolve,

Jeelian Leong

CEO - Leo Electric

1 September 2025

Why Choose Leo?



Longevity & Supply Chain Resilience

With 14 years of operation, we are a proven, resilient family business that has weathered industry-wide bans, economic shifts, and global disruptions. Our long-standing, solidified relationships with suppliers ensure a robust and reliable supply chain, guaranteeing the continuous availability of spare parts and components long after the sale. While others face breakdowns and abandoned products, we provide unwavering support, ensuring your investment is protected for the long term.

Engineering Expertise & Artisan Craftsmanship

We are engineers and artisans at our core, with deep roots in consumer electronics and precision manufacturing. This foundational expertise allows us to handle complex electronics engineering challenges that baffle our competitors—so much so that they often send their customers to us for repairs. We don't just sell products; we design, produce, and customize high-quality solutions to your exact specifications, delivering unparalleled reliability and performance.

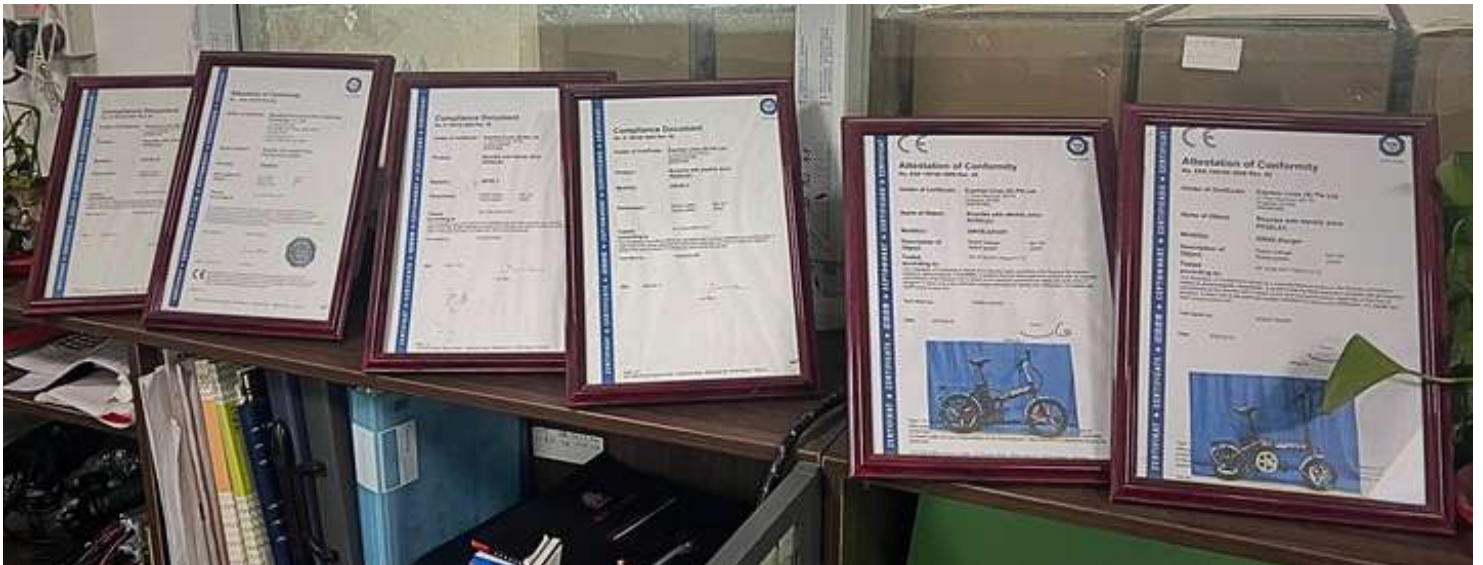
Obedience to Regulations & Proactive Partnership

We don't just follow regulations; we engage in continuous, proactive dialogue with government authorities to ensure full compliance and provide practical feedback from the field. This collaborative partnership ensures we operate within guidelines while helping shape practical policies. Our commitment to adaptation has made us a trusted, repeat provider of specialized solutions for sensitive government and infrastructure projects.

Service, Customization & Total Ecosystem Solutions

We are committed to total customer satisfaction with comprehensive after-sales service and bespoke customization. Recognizing that modern EV challenges demand holistic answers, we have evolved into a full turnkey provider. Through our consortium of ecosystem partners, we offer all-in-one solutions—from vehicles and charging infrastructure to energy systems—making us the single source for all your electrification needs, both locally and offshore.

14 Years of Certified Engineering Excellence:



Built to TÜV SÜD and UL Standards

For over 14 years, Leo Electric has proudly adhered to globally recognized safety and quality benchmarks through our enduring partnerships with TÜV SÜD and UL. These certifications are not merely badges—they reflect our unwavering commitment to engineering excellence, user safety, and environmental resilience. We have consistently evolved alongside updated standards, engaged in proactive dialogue with certifying bodies, and deployed rigorously tested solutions across all product lines. This disciplined approach ensures every vehicle and component we deliver meets the highest levels of performance, reliability, and regulatory acceptance—enabling trust in every ride.

Key Milestones



2016

Designed and delivered specialized off-road electric scooters for the Singapore Armed Forces, securing the contract through a competitive tender process that included 15 other companies.



2018

Successfully defended and won the same tender against renewed competition, reaffirming the Singapore Armed Forces' continued trust in our technical expertise and proven performance.



2020

The COVID-19 delivery surge drove us to enhance e-bike comfort and load capacity while rigorously adhering to Singapore's TÜV SÜD-certified safety standards of strict materials, vehicle size and weight allowances.



2022

Selected by SP Power, Singapore's national power grid, to develop custom electric scooters for secure, efficient underground tunnel navigation.



2025

Building on our proven performance and reliability, SP Power has again selected us to continue providing customized electric vehicles, reaffirming their trust in our innovative solutions and consistent delivery for critical infrastructure needs.



What's Next?

We're launching next-gen utility electric micromobility, expanding into Nigeria, Ghana and the Philippines, and enhancing our platform with solutions from our consortium experts—driving global electrification with intelligence and reliability.



Leo Electric Consortium: Ecosystem Partners

The transition from traditional combustion engines requires more than just vehicles; it demands entirely new ecosystems. This is why Leo Electric founded a new consortium—a strategic alliance of world-class experts in solar microgrids, Battery Energy Storage Systems (BESS), climate finance, and carbon credit origination. This unique, integrated approach allows us to deliver true turnkey solutions. We don't just provide electric vehicles; we deploy the complete enabling infrastructure: from solar-powered charging hubs and battery-swapping stations to securing climate financing and managing the entire carbon credit value chain for our partners. By addressing the financial, infrastructural, and environmental challenges simultaneously, Leo Electric is uniquely positioned to de-risk and accelerate the clean mobility transition. We are the reliable, full-service partner built to tackle the ecosystem challenges of the 21st century and power the pivot to electric.



William Leong

Electronics Manufacturing,
Founder of Leo Electric

Mr. Leong brings 14+ years in micromobility and 4 decades of electronics manufacturing expertise from Toshiba, Panasonic and Samsung to guide product innovation and quality.



Sum Kun Shan

ESG Finance,
ex-EnterpriseSG

A 15-year energy transition leader, Kun Shan shapes decarbonization strategy and integrates sustainable infrastructure with commercial investment goals.



Garry Tay

Solar EPC & BESS,
B2GEnergies

Garry boasts 30 years in energy storage and EV innovation, shaping national standards and decarbonization solutions with the Energy Market Authority and EnterpriseSG in Singapore.



Cliff Chua

Carbon Credits Specialist,
XCarbon

Cliff is a seasoned decarbonization leader with 30+ years securing S\$90M+ in funding and driving ESG strategy across telecom, infrastructure, and heavy industries.



Tsoi Mun Heng

Engineering Strategy,
Singapore Institute of Technology

Mun Heng leverages his distinguished engineering and Air Force command experience to drive technology strategy at the highest levels including the National Research Foundation in Singapore.



Jolin Lee

Project Management,
Singapore Government

Jolin integrates ESG goals into operations, leveraging 15 years in tech and engineering to drive sustainable, cost-effective, and stakeholder-aligned outcomes at state level with the Singapore government.



Alfred Foong

Energy & Technology
Quantum Energy Consulting

Alfred leverages 25 years in engineering, power systems, and intelligent infrastructure to drive sustainable innovation and resilient technology solutions.

Product Development Pipeline



Sodium-ion batteries

Leading the shift to sodium-ion batteries—fireproof, explosion-proof, and fast-charging—to deliver unmatched safety and practical energy under real-world conditions but also reducing reliance on scarce resources.



Safer public charging

Working with Singaporean authorities to deploy safer charging infrastructure, emphasizing compliance and alignment with national standards. This reflects our continuous partnership with regulators to align with safety and policy goals.



Climate finance integration

We are developing an automated climate finance platform that tracks and verifies emissions reductions to ensure high-integrity carbon credits, enabling transparent and credible sales in global compliance markets.



Holistic safety standards

Partnering with government agencies to advance safety standards and registration policies for EVs; promote responsible rider behavior, deter illegal modifications, enhance public safety through education, technical compliance, and smarter regulatory design; creating a more secure and sustainable mobility environment for all.

Product Overview

We specialize in crafting fully customizable electric mobility solutions designed to meet the precise needs of our clients. While our bestsellers depicted here serve as reliable starting points, we pride ourselves on adapting everything from powertrains and batteries to frames and software to your unique operational requirements. Beyond vehicles, we deliver an end-to-end ecosystem including smart charging infrastructure, IoT fleet management tools, and solar-integrated energy systems, ensuring seamless, scalable electrification. Whether for last-mile logistics, municipal use, or specialized industrial applications, we engineer not just products, but partnerships built on 14 years of resilience, innovation, and unwavering commitment to quality and compliance.

Client Case Study: Delivery Fleets



Optimizing Delivery E-Scooters for Singapore's Urban Logistics

Developed delivery-focused electric bicycle fleets prioritizing rider comfort and load capacity (150kg max) while adhering to the Land Transport Authority (LTA)'s stringent regulations: 20kg weight, 70cm width, 25km/h speed cap, and UL2272 certification. Key innovations included ergonomic memory foam seats, hydraulic suspension for vibration damping, and a 48V 20Ah UL2272-certified battery enabling 80km range for full-day operations. Despite strict dimensional constraints, the design integrated detachable cargo racks (40kg capacity) and a lightweight 6061-T6 aluminum frame. All units passed LTA's periodic inspections, ensuring compliance and rider safety. Rider feedback confirmed reduced fatigue and increased delivery efficiency, validating the balance of comfort, utility, and regulation adherence.

Delivery Electric Bicycle

Singapore's most popular delivery e-bike: the ECO Drive Classic. While others sacrifice critical wheel size for battery space, we refuse to compromise. Our 20" wheels provide all-day comfort, and our swappable batteries ensure you never stop earning.



EN15194 Certified



**150kg Max Load
48v15aH Battery
250W (500W Peak) Motor**



**20km/h Speed
25km Range**

Sports Electric Bicycle

Built to dominate any terrain with a formidable 1500W motor, reaching 60km/h and conquering 35-degree gradients. Experience precision-controlled stability with a CNC-machined full suspension system and aggressive 20"x4.0 fat tires. The advanced dual battery system delivers up to 80km of range, putting powerful riding modes at your command. For those who demand high-performance electric mobility for all terrains.



**Hydraulic suspension with
rear hydraulic shock
absorber**

Seat extendable to 21.5"

**150kg Max Load
48v20aH Battery (upgradeable)
750W (1500W Peak) Motor**

**60km/h Speed
80km Range**

Cargo Electric Bicycle

Featuring a 2-cubic-foot cargo compartment seamlessly integrated below the seat, offering secure storage for tools, gear, or groceries. This practical design doesn't sacrifice power—a robust 2000W motor tackles 30-degree inclines with ease, while the long-range removable 48V battery delivers up to 80km on a single charge. Equipped with heavy-duty 20"x4" tires, a lockable suspension fork, EABS-enhanced disc brakes, and integrated lighting, it confidently blends rugged capability with everyday utility.



UL2849 Certified



250kg Max Load
48v20aH Battery (upgradeable)
750W (1500W Peak) Motor



60km/h Speed
80km Range

Client Case Study: National Power Grid



Delivering Fire-proof Electric Scooters for SP Group's Underground Operations

Designed and delivered specialized electric scooters for SP Group's underground tunnel operations, featuring fire-resistant and explosion-proof construction to meet strict safety requirements in high-risk environments. Equipped with high-torque 1000W motors, IP67-rated sealed powertrains, and UL 2272-certified battery systems, these vehicles reliably navigate steep gradients and confined spaces while ensuring operational safety and compliance with Singaporean utility standards. All units underwent rigorous validation for performance, environmental resistance, and functional safety under simulated tunnel conditions.

Electric Moped

Built for the urban ride, this high-power electric moped combines sleek, modern styling with commanding performance. Its robust electric drive delivers instant acceleration and smooth handling, supported by hydraulic front suspension and wide 130/60-13 tires for superior stability. Equipped with front and rear disc brakes, a digital speedometer, and generous under-seat storage, it offers both practicality and confidence in every commute. Powerful, agile, and designed for city life—this is electric mobility redefined.



Front and rear disc brakes
Hydraulic suspension



300kg Max Load
72v50aH Battery (upgradeable)
2000W Motor



80km/h Speed
100km Range

Electric Motorcycle

Born to carry the load, this robust electric motorcycle is engineered for professionals who demand both power and practicality. Its high-torque 3000W motor delivers confident acceleration and a top speed of 100 km/h, even when fully laden. With an exceptional 200 km range, it's built for all-day missions without frequent recharging. Batteries are removable but for ultimate flexibility, customize with DC fast-charging—compatible with electric car charging networks—or rely on standard AC fast charging. Durable, agile, and designed for work, it's the ultimate tool for urban delivery, logistics, or tradespeople who refuse to compromise on performance or endurance.



AC/DC charging inlet
Front and rear disc brakes
Hydraulic suspension



600kg Max Load
72v100aH Battery
3000W Motor



100km/h Speed
200km Range

Client Case Study: Singapore Military



Delivering Certified Tactical Micromobility for Singapore MINDEF

Our engineering integrates rigorous validation with full regulatory adherence. Our tactical scooters feature IP67-rated powertrains and 6061-T6 aluminum frames, developed using methodologies aligned with MIL-STD-810G to ensure performance under extreme tropical, vibrational, and off-road conditions. Despite this military-grade durability focus, all production models are fully certified to TÜV SÜD EN 15194 and UL 2272, meeting all LTA requirements for safety, electrical integrity, and public road use in Singapore.

Agricultural Electric Wagon

Built for the farm: a rugged electric utility wagon designed to handle demanding agricultural tasks. With a robust 300 kg payload capacity and the ability to climb 30-degree slopes, it navigates rough terrain and steep inclines with ease. The spacious, open-bed design offers practical hauling for crops, feed, or equipment, while hydraulic suspension and drum brakes ensure stable, controlled rides in uneven fields. Dependable, efficient, and emission-free—this electric wagon is made to work hard from dawn till dusk.



Front and rear disc brakes
Hydraulic suspension



300kg Max Load
72v50aH Battery (upgradeable)
1500W Motor



60km/h Speed
80km Range

Passenger Electric 3-wheeler

Introducing a versatile electric three-wheel passenger vehicle designed for modern urban mobility. Powered by a robust 3000W motor and a high-capacity 72V battery, it reaches speeds up to 60 km/h and handles inclines up to 20 degrees. With an 80 km range and a 500 kg load capacity, it offers ample space for passengers and cargo. Ideal for shared transport, delivery services, or commercial use, this efficient trike combines practicality with zero-emission performance.



Front and rear disc brakes

500kg Max Load

60km/h Speed

Hydraulic suspension

72v100aH Battery (upgradeable)

80km Range

1500W Motor

Delivery Electric 3-wheeler

Purpose-built, zero-emission solution for urban deliveries. Designed to turn heads and meet demands, this compact yet capable mini-truck is offers 80km range on a single charge. With a generous 300 kg carrying capacity and the ability to climb steep 30-degree inclines, it effortlessly navigates crowded streets and hilly terrain. Its functional 2000*1200*1000 mm frame provides ample secure storage, while hydraulic suspension and drum brakes ensure a smooth and safe ride. Perfect for deliveries, mobile vending, or daily logistics —this practical electric trike is built to work hard and operate cleanly. Refrigerated cold-chain option available for customization.



Front and rear disc brakes
Hydraulic suspension
Refrigeration (upgradeable)

300kg Max Load
70v50aH Battery (upgradeable)
1500W Motor

60km/h Speed
80km Range

What's next: Electrifying Infrastructure, Strengthening Communities



Using solar to power farmers to use electric wagons, refrigeration & productivity tools

Recognizing a critical gap in agricultural efficiency, Leo Electric now empowers farmers with specialized electric wagons and micromobility solutions. These vehicles enhance on-site productivity by enabling easier transport of goods and are complemented by electric cold chain options to significantly reduce spoilage. Furthermore, the Leo Electric Consortium offers integrated solar street lighting and microgrid solutions, turning farms into smarter, more sustainable, and waste-free operations. This holistic approach merges clean mobility with renewable energy to transform rural productivity.

Charging Solutions

We go beyond manufacturing vehicles by deploying the smart infrastructure that makes electric mobility viable. Our network of automated battery-swapping lockers and solar-assisted charging stations provides a turnkey solution tailored to your market's needs.

Each secure charging compartment features:

- High-Efficiency Charging (>92%) with RS-485 communication
- Flexible Power Output (48V-72V) supporting a wide range of light EVs
- Intelligent Management with automatic recognition, full-charge cutoff, and remote monitoring via TCP/IP
- Rugged & Safe Design built from galvanized steel with IP54 rating, fireproofing, and thermal management

From dense urban cores to remote solar-powered microgrids, we deliver the full ecosystem—ensuring your transition to electric is seamless, scalable, and sustainable. We don't just sell EVs; we enable entire communities to electrify.



**RS-485
TCP/IP Protocol**



**IP54 Waterproofing
Fireproofing
Thermal Management**



**Customizable
compartments**

2025 Integrated Annual Report

**Together We Thrive –
Sustainably &
Resiliently**

**Thank
You**

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