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# BIA FAST DC CHARGING PLATFORM

## Business Case

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### Executive Summary

The transition to electric fleets in Australia represents a **practical, immediate opportunity for fleet operators** to reduce costs, improve operational performance, and future-proof their businesses in an increasingly regulated and competitive market. As outlined in the business case, rising diesel prices, emissions regulations, and corporate sustainability commitments are accelerating the shift toward electrification, placing pressure on operators to act while also creating a clear first-mover advantage.

However, the primary barrier to adoption is not vehicle availability, but the **lack of reliable, high-power charging infrastructure** that aligns with the operational demands of heavy and commercial fleets. Conventional charging systems are too slow and fragmented, resulting in downtime, inefficiencies, and uncertainty in investment decisions.

The BIA 150kW FAST DC CHARGING Platform addresses these challenges by delivering **fast, depot-based charging that maintains fleet productivity while reducing operating costs**. With recharge times of approximately 80 minutes and the ability to support high-utilisation environments, the platform enables efficient operations without compromising service levels.

From a financial perspective, electric fleets deliver **significant operating cost savings**, including up to \$70 per 100km for heavy vehicles and over \$200,000 in total cost of ownership savings per vehicle over five years. Returns are highly dependent on utilisation, with high-usage environments achieving faster payback, particularly when combined with solar integration.

For fleet operators, the value proposition is clear: lower operating costs, improved uptime, and scalable infrastructure that grows alongside fleet expansion. The solution is specifically designed for **real-world deployment in logistics depots, warehouses, and industrial environments**, where predictable routes and high daily utilisation maximise both operational and financial outcomes.

Ultimately, this is not a future concept but a **ready-to-deploy solution**. Organisations that act now can secure cost advantages, build internal capability, and position themselves ahead of competitors in a rapidly evolving transport landscape. For fleet operators, the BIA

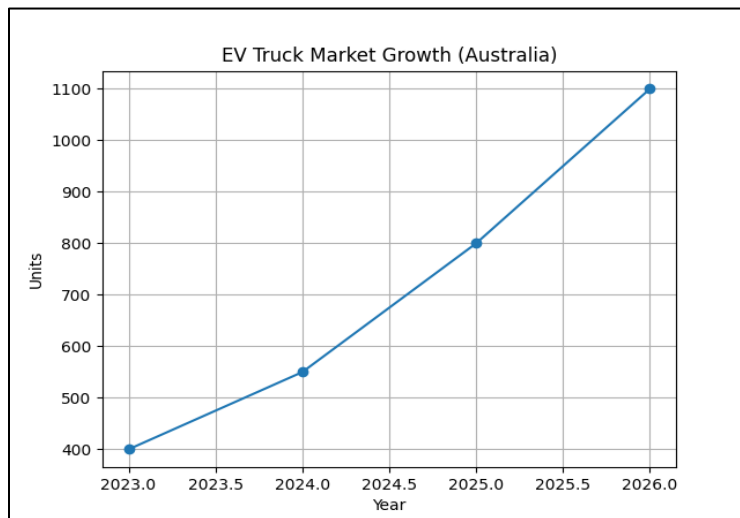


platform provides a **clear, low-risk pathway to electrification**, enabling them to reduce costs, improve efficiency, and confidently transition to a low-emissions future.

## Market Opportunity

The Australian EV truck market is experiencing **rapid and sustained growth**, driven by a combination of **regulatory pressure, rising diesel costs, and increasing corporate commitments to decarbonisation**. Government policies such as **emissions standards and incentives** are accelerating the transition, while **fuel price volatility** is placing additional financial strain on traditional diesel fleet operations. At the same time, major logistics and transport companies are actively pursuing **electrification strategies** to meet **ESG targets** and remain competitive in a **changing market environment**.

For fleet operators, this creates a **clear window of opportunity**. Early adopters of electric vehicle infrastructure can secure **lower operating costs**, improve **long-term cost predictability**, and gain a **competitive advantage** in contracts where sustainability is becoming a key requirement. In addition, early deployment allows organisations to build **internal capability, optimise operations, and scale infrastructure** ahead of broader market demand. As adoption increases, access to **reliable charging infrastructure** will become a **critical differentiator** between industry leaders and those struggling to keep pace.



## Customer Challenges

Fleet operators face increasing pressure to transition to electric vehicles while maintaining operational efficiency and cost control. A key challenge is **vehicle downtime**, as conventional charging solutions, particularly AC-based systems, are too slow and lack the



power output required for heavy-duty applications. This creates significant operational inefficiencies in logistics environments, where delays directly impact delivery schedules and revenue.

These challenges are compounded by **infrastructure constraints**, including limited grid capacity at depot locations. Many sites require costly electrical upgrades to support high-power charging, creating barriers to deployment. In addition, charging infrastructure has been **fragmented and not designed for fleet-scale operations**, limiting integration and scalability.

As a result, fleet operators face delayed electrification, underutilised assets, and uncertainty in investment decisions. Overcoming these challenges requires a solution specifically designed for the operational realities of heavy and commercial transport systems.

## Solution Overview

The BIA 150kW FAST DC CHARGING platform delivers a **fast, scalable, and reliable charging solution** designed specifically for heavy and commercial fleet operations. By providing high-power DC charging, the system enables vehicles to recharge within operationally viable timeframes (approximately 80 minutes for a 200kWh battery), significantly reducing downtime compared to conventional solutions.

The platform is built for **industrial-grade performance**, supporting high utilisation environments with dynamic load management (OCPP) and optimised charger-to-truck ratios (1.3–4), ensuring efficient depot operations. **A key advantage is its ability to be installed with 3 phase power supply with 63 amps or 100 amps, and integrate with solar PV and battery storage, reducing reliance on grid electricity and lowering long-term energy costs.**

By combining rapid charging, smart energy management, and centralised depot deployment, the BIA 150KW FAST DC CHARGING platform not only supports fleet electrification but also enables operators to **maintain productivity, reduce operating costs, and scale efficiently as demand grows.**

## Operating Cost Savings

Electric fleets provide significant operating cost savings across all vehicle classes, with measurable reductions in cost per kilometre compared to diesel. As shown in Table 1, savings range from approximately **\$24 per 100km for light commercial vehicles** to nearly **\$70 per 100km for heavy rigid trucks**, with articulated vehicles also achieving savings above **\$50 per 100km.**



These savings are driven by lower energy costs and reduced maintenance requirements, as electric drivetrains have fewer moving parts and lower servicing needs. In high-utilisation environments, these cost advantages compound quickly, enabling fleet operators to **improve margins, stabilise operating costs, and achieve faster returns on investment.**

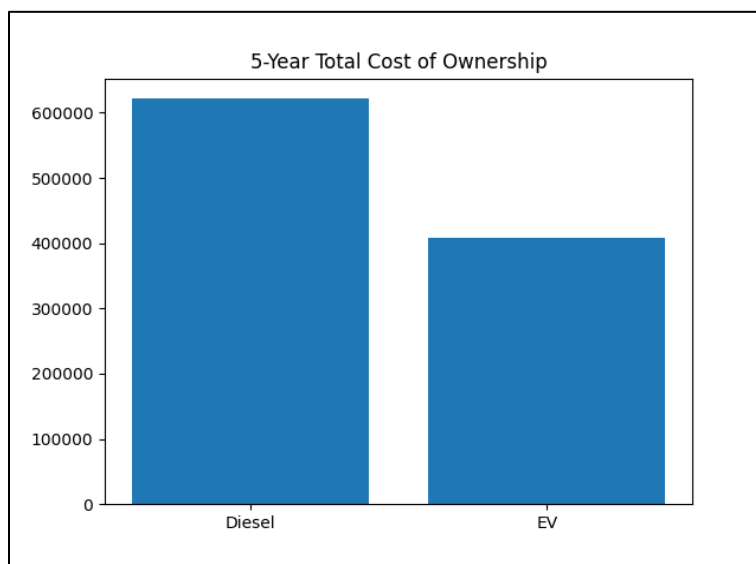
Vehicle	Diesel	EV	Savings
LCV	33.12	9.00	24.12
Light Duty	44.16	18.00	26.16
Heavy Rigid	110.40	40.50	69.90
Semi	115.92	58.50	57.42

**Table 1**

### Total Cost of Ownership

Over a five-year period, electric vehicle (EV) fleets demonstrate a **clear financial advantage** over diesel fleets, driven by **lower fuel and maintenance costs**. As illustrated in the chart, diesel vehicles incur **total costs exceeding \$620,000**, while EVs operate at approximately **\$410,000**, delivering **savings of over \$200,000 per vehicle**. These cost reductions are primarily attributed to **lower energy expenses, reduced servicing requirements, and the elimination of consumables** such as engine fluids.

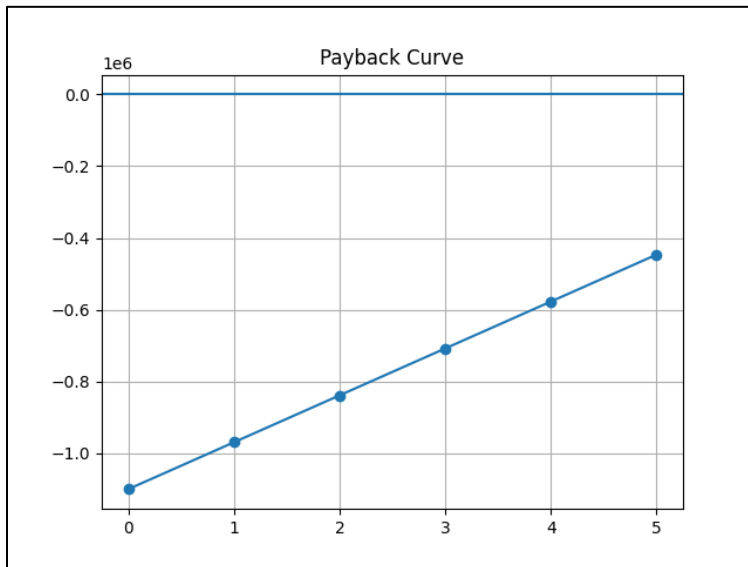
For fleet operators, this translates into **improved long-term profitability, greater cost predictability, and reduced exposure to fuel price volatility**. As utilisation increases, these savings **compound further**, strengthening the **business case for electrification**.



## Payback Analysis

Investment returns for fleet electrification are highly dependent on **vehicle utilisation** and **operational intensity**. As illustrated in the payback curve, **cumulative cash flow** improves steadily over time; however, **lower utilisation scenarios** result in **longer recovery periods** due to reduced annual savings. In contrast, **high-usage environments**—such as logistics depots or airport operations—generate **significantly greater daily savings**, accelerating **payback timelines**.

For fleet operators, this means that vehicles operating at **higher daily kilometre ranges** can achieve **materially faster returns on investment**. When combined with **energy optimisation strategies** such as **solar integration**, **payback periods** can be further reduced, improving **overall project viability** and strengthening the **financial case for electrification**.



## Customer Value Proposition

The solution delivers **clear, measurable value** for fleet operators by addressing the **key barriers to electrification—cost, reliability, and scalability**. By significantly reducing **fuel and maintenance expenses**, it lowers **overall operating costs** while providing greater **cost predictability** compared to diesel-based operations. **Fast, depot-based charging** improves **vehicle uptime**, ensuring fleets remain **productive** and aligned with **demanding operational schedules**.

In addition, the platform is designed to **scale alongside fleet growth**, enabling operators to expand infrastructure **without increasing complexity**. This allows organisations to **transition to electric vehicles with confidence**, improving **efficiency**, meeting **sustainability targets**, and strengthening **long-term competitiveness** in a **rapidly evolving transport market**.

## Deployment Scenarios

The solution is best deployed in **high-utilisation fleet environments** where operational efficiency and rapid vehicle turnaround are essential. In logistics depots, vehicles typically operate on fixed routes with predictable schedules, making them well-suited to **centralised, depot-based charging infrastructure**. Chargers can be positioned to support overnight charging as well as opportunity charging during loading periods or driver breaks, ensuring minimal disruption to daily operations while maximising fleet uptime.



In industrial environments such as ports, warehouses, and distribution centres, fleets often operate on **high daily kilometre cycles**, creating strong potential for cost savings and faster return on investment. The consistent utilisation of vehicles in these settings allows operators to fully leverage the economic benefits of electrification.

The platform also supports **scalable deployment**, enabling organisations to expand charging infrastructure in line with fleet growth, while maintaining operational simplicity, cost efficiency, and long-term flexibility.

### Ready-to-Deploy

The transition to electric fleets is no longer a future consideration, it is a **ready-to-deploy opportunity** driven by clear market demand, rising operational pressures, and proven economic benefits. Fleet operators now face a pivotal moment where delaying electrification increases exposure to fuel cost volatility, regulatory risk, and competitive disadvantage.

The BIA 150KW FAST DC CHARGING platform provides a **practical, deployment-ready solution** that directly addresses current operational challenges, enabling fleets to transition without compromising productivity or scalability. With demonstrated operating cost savings, strong total cost of ownership advantages, and accelerated payback in high-utilisation environments, the business case is both commercially and operationally compelling.

Importantly, the solution is designed for immediate implementation within existing depot and industrial environments, allowing organisations to begin realising benefits without complex system overhauls. For fleet operators, this represents a clear pathway to **reduce costs, improve efficiency, and scale confidently into a low-emissions future.**