



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT



BSHFMF POWER SOLUTION PVT LTD

ELECTRIC VEHICLE TRANSFORMATION

1,600 – 2000 km



FAST CHARGING



ZERO EMISSIONS



IBSS TECHNOLOGY



EV CONVERSIONS



FINANCING & PARTNERSHIPS



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Table of Contents

BSHFMF Power Solution: Electric Vehicle Innovation	5
When It Started	5
ABOUT EV (Electric Vehicles)	7
How Electric Vehicles Work.....	8
General Overview	8
Fuel-Free and Environmentally Sustainable Transport	9
Low-Noise and Urban-Friendly Operation.....	9
Exceptional Mileage and Long-Range Capability	9
Operational Efficiency and Cost Advantages	10
Versatile Applications Across Transport Sectors	10
A Practical Pathway to Clean Mobility.....	10
Environmental Benefits.....	11
Energy Efficiency and Cost Advantages	11
Noise Reduction and Driving Comfort	11
Technological Advancements.....	12
Role of EVs in Commercial Transportation	12
Future of Electric Mobility	12
TECHNICAL DATASHEET	13
Electric Commercial Vehicle Systems.....	13
BSHFMF Power Solution (Pvt) Ltd.....	13
2. Vehicle Categories Supported	13
3. Energy & Power System	13
4. Driving Range & Performance.....	14
5. Noise & Operational Characteristics.....	14
6. Environmental Benefits.....	14
7. Operational & Maintenance Advantages	14
8. Charging & Energy Efficiency.....	15
9. Applications	15
10. Key Technical Advantages	15
11. Deployment Status.....	15
12. Summary.....	Error! Bookmark not defined.
Innovative Electric Vehicle Systems	17
Advanced EV System Engineering	18
Intelligent Backup Support System (IBSS)	18



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Focus on Commercial EV Applications	18
Sustainable, Practical, and Profitable Mobility	19
Driving the Future of Commercial Electric Transport	19
1. Unmatched Range & Intelligent Backup Support.....	19
Industry-Leading Driving Range	19
Intelligent Backup Support System (IBSS)	19
Seamless Integration & Performance Stability.....	20
Operational Reliability & Long-Term Assurance.....	20
Strategic Advantage for Commercial Fleets	20
3. High-Efficiency Motor Systems	22
4. Smart Fleet Management	23
Vehicle Compatibility & Customization	25
Intelligent Backup Support System (IBSS)	26
Intelligent Backup Support System (IBSS)	26
Purpose and Vision of IBSS	26
How IBSS Works.....	27
Exceptional Range Extension Capability	28
Seamless Integration Without Vehicle Modification.....	29
Smart, Compact, and Lightweight Design.....	29
Enhanced Battery Protection and Longevity	29
Commercial-Grade Reliability and Warranty.....	29
Operational and Economic Benefits	29
A Game-Changing EV Innovation	30
TECHNICAL DATASHEET & SPECIFICATION TABLE	30
Commercial Electric Vehicle Systems.....	30
BSHFMF Power Solution (Pvt) Ltd.....	30
1. System Overview	30
2. Driving Range & Performance.....	30
3. Intelligent Backup Support System (IBSS)	31
4. Electric Motor Specifications	31
5. Motor Controller System.....	32
6. Battery Technology	32
7. Energy Efficiency & Cost Benefits.....	32
8. Environmental & Regulatory Compliance	33
9. Deployment & Scalability.....	33



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

10. Key Technical Advantages (Summary)	33
11. Warranty & Support	34
Charging & Performance	34
Warranty & Services	36
Production	37
EV Components	37
Motor Specifications (BMC1540 300KW BLDC Motor)	38
Additional Notes	39
Financing & ROI	39
L250KW	Error! Bookmark not defined.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

ABOUT BSHFMF

BSHFMF Power Solution: Electric Vehicle Innovation

BSHFMF Power Solution Pvt Ltd began its journey into electric vehicle technology with a focus on solving one of the industry’s biggest challenges — **range limitation in commercial EVs**. Recognizing that long-distance capability and reliability are critical for commercial transport (buses, trucks, logistics fleets), the company initiated dedicated R&D efforts to develop advanced support systems that significantly enhance battery performance.

When It Started

The company’s focused work on EV technology, particularly for commercial vehicles, began in earnest around **2023**. During this period, BSHFMF Power Solution conceptualized and developed its proprietary **Intelligent Backup Support System (IBSS)** — a breakthrough innovation aimed at overcoming range anxiety and improving operational efficiency for heavy-duty electric transport.





ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Current Focus Areas



BSHFMF will Coverage

> **3 big** cities

Peshawar, Lahore, Karachi.



First year Manufacturing/
Conversion sales volume

> **1,500** units



Total sales volume
2 to 3 years

> **15,000** units



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

ABOUT EV (Electric Vehicles)

EV, commonly referred to as an **Electric Vehicle**, is a type of automobile that operates using **electric motors powered by rechargeable battery systems**, instead of conventional internal combustion engines (ICE) that rely on gasoline or diesel fuel. Electric vehicles represent a fundamental shift in transportation technology, offering a cleaner, more efficient, and more sustainable alternative to fossil fuel-based mobility.

How Electric Vehicles Work



Electric vehicles store electrical energy in high-capacity batteries, which supply power to one or more electric motors. These motors convert electrical energy into mechanical motion, driving the vehicle's wheels. Unlike internal combustion engines, electric motors provide **instant torque**, smooth acceleration, and highly efficient energy conversion.

General Overview

BSHFMF Power Solution (Pvt) Ltd is a technology-driven company specializing in the development, integration, and deployment of **advanced electric vehicles (EVs) for commercial transportation**. The company's EV portfolio is designed to serve a wide range of heavy-duty and high-capacity transport applications, including **electric buses, electric trucks, electric train systems, and electric Hiace-type commercial vehicles**. These



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

solutions are engineered to meet the demanding requirements of public transport systems, logistics operations, and long-distance commercial mobility.

Fuel-Free and Environmentally Sustainable Transport

All electric vehicles developed and supported by BSHFMF Power Solution operate on **100% electric power**, completely eliminating the need for conventional fuels such as diesel or petrol. As a result, these vehicles are:

- **Fuel-free**, reducing dependency on fossil fuels
- **Lubricant-free**, minimizing routine engine oil and mechanical servicing
- **Zero-emission**, producing no exhaust gases or air pollutants

This makes BSHFMF Power Solution's EVs an ideal solution for governments, municipalities, and private operators seeking to reduce **carbon emissions, urban air pollution, and environmental impact**, while aligning with global climate and sustainability targets.

Low-Noise and Urban-Friendly Operation

A key advantage of BSHFMF Power Solution's electric vehicles is their **low-noise operating system**. Unlike conventional internal combustion engine vehicles, these EVs generate minimal mechanical and operational noise, making them particularly suitable for:

- **Urban public transport corridors**
- **Residential and densely populated areas**
- **Night-time and long-duration operations**
- **Intercity and long-distance routes**

Low-noise operation improves passenger comfort, reduces noise pollution, and supports modern smart-city transport planning.

Exceptional Mileage and Long-Range Capability

One of the most distinguishing features of BSHFMF Power Solution's commercial EV systems is their **exceptional driving range**. Depending on vehicle type, load conditions, and system configuration, these electric vehicles are capable of achieving an impressive **range of approximately 1,600 to 2,000 kilometers on a single charge**.

This extended range is made possible through:

- Advanced energy management systems
- High-efficiency electric drivetrains
- Intelligent backup and power support technologies
- Optimized battery utilization for commercial duty cycles



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Such long-range capability significantly reduces charging frequency, minimizes vehicle downtime, and enables **continuous operation for long-haul routes, intercity transport, and high-mileage fleet operations**—a critical requirement for commercial transport operators.

Operational Efficiency and Cost Advantages

By eliminating fuel consumption, reducing maintenance requirements, and improving energy efficiency, BSHFMF Power Solution's EVs offer substantial **operational and lifecycle cost savings**. Key benefits include:

- Lower energy costs compared to diesel-based transport
- Reduced maintenance due to fewer moving parts
- Improved fleet availability and reliability
- Longer service intervals and reduced downtime

These advantages make BSHFMF Power Solution's electric vehicles not only environmentally responsible but also **financially attractive** for both public and private sector transport projects.

Versatile Applications Across Transport Sectors

BSHFMF Power Solution's EV technologies are adaptable across multiple commercial transport segments, including:

- **Public transport buses** (urban, BRT, and intercity)
- **Commercial and heavy-duty trucks**
- **Electric rail and train support systems**
- **Passenger and cargo Hiace-style vehicles**

This versatility allows transport authorities and fleet operators to adopt a **unified electric mobility strategy** across different vehicle classes.

A Practical Pathway to Clean Mobility

Through a combination of **zero-emission performance, long-range capability, low-noise operation, and commercial viability**, BSHFMF Power Solution (Pvt) Ltd provides a practical and scalable pathway toward the future of clean, efficient, and intelligent transportation.

Key components of an EV include:

- Rechargeable battery pack
- Electric motor(s)
- Power electronics and inverter
- Battery management system (BMS)
- Onboard charging and energy control systems



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Environmental Benefits

One of the most significant advantages of electric vehicles is their **environmental performance**. EVs:

- Produce **zero tailpipe emissions**, eliminating carbon dioxide (CO₂), nitrogen oxides (NOx), and particulate matter
- Help reduce urban air pollution and smog
- Support national and global climate change mitigation goals

When charged using renewable energy sources such as **solar, wind, or hydropower**, electric vehicles can operate with an **extremely low or near-zero carbon footprint**, making them a key solution for sustainable transportation systems.

Energy Efficiency and Cost Advantages

Electric vehicles are substantially more energy-efficient than traditional fuel-powered vehicles. Electric drivetrains convert a higher percentage of stored energy into vehicle movement, whereas internal combustion engines lose a significant amount of energy as heat.

Key economic benefits include:

- Lower energy cost per kilometer
- Reduced maintenance due to fewer moving parts
- No fuel, oil changes, or exhaust system maintenance
- Lower total cost of ownership (TCO) over the vehicle's lifecycle

These advantages make EVs particularly attractive for **commercial fleets**, public transport systems, and high-mileage applications.

Noise Reduction and Driving Comfort

Electric vehicles operate with **minimal mechanical noise**, as they do not use combustion engines. This results in:

- Quieter urban environments
- Improved passenger and driver comfort
- Reduced noise pollution in residential and commercial areas

Low-noise operation is especially beneficial for **public transport, night-time logistics, and city operations**.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Technological Advancements

Recent advancements in battery technology, power electronics, and energy management systems have significantly enhanced the **range, reliability, and performance** of electric vehicles. Modern EVs offer:

- Extended driving ranges suitable for long-distance and commercial use
- Faster charging capabilities
- Smart energy management and diagnostics
- Improved battery lifespan and safety

These technological improvements have made EVs increasingly competitive with conventional vehicles in both performance and reliability.

Role of EVs in Commercial Transportation

Electric vehicles are now widely adopted across various transport sectors, including:

- Public and mass transit (electric buses, BRT systems)
- Logistics and freight transport (electric trucks)
- Rail and auxiliary transport systems
- Commercial passenger vehicles

For commercial operators, EVs provide predictable operating costs, higher energy efficiency, and compliance with evolving environmental regulations.

Future of Electric Mobility

Electric vehicles are widely recognized as a cornerstone of the future transport ecosystem. Governments, industries, and municipalities worldwide are investing heavily in EV infrastructure and policy frameworks to support:

- Energy security
- Emission reduction targets
- Sustainable urban development

As charging networks expand and renewable energy integration increases, electric vehicles will continue to play a critical role in building **clean, intelligent, and resilient transportation systems**.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

TECHNICAL DATASHEET

Electric Commercial Vehicle Systems

BSHFMF Power Solution (Pvt) Ltd

2. Vehicle Categories Supported

BSHFMF Power Solution's EV systems are designed for the following commercial vehicle types:

- Electric Buses (Urban, BRT, Intercity)



- Electric Trucks (Medium & Heavy Duty)
 - Electric Train / Rail Support Systems
 - Electric Hiace / Commercial Passenger Vehicles
-

3. Energy & Power System

- **Energy Source:** 100% Electric
- **Fuel Requirement:** None (Fuel-Free Operation)
- **Lubricants:** Not Required
- **Emissions:** Zero Emissions (No CO₂, NO_x, or Particulate Matter)

The EV systems eliminate internal combustion engines, resulting in fully electric propulsion with no fuel or lubricant dependency.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

4. Driving Range & Performance

- **Driving Range:**
 - **1,600 – 2,000 km per single charge**
(Actual range depends on vehicle configuration, payload, terrain, and duty cycle)
- **Energy Management:**
 - Advanced battery optimization
 - Intelligent power distribution
 - High-efficiency drivetrain integration

This extended range significantly reduces charging frequency and enables continuous long-distance commercial operation.

5. Noise & Operational Characteristics

- **Operating Noise Level:** Very Low
- **Mechanical Noise:** Minimal (No combustion engine)
- **Suitability:**
 - Urban routes
 - Residential areas
 - Night-time operations
 - Long-distance corridors

Low-noise operation enhances passenger comfort and minimizes urban noise pollution.

6. Environmental Benefits

- Zero exhaust emissions
 - No fuel combustion
 - Reduced carbon footprint
 - Supports national and international climate targets
 - Compliant with clean transport and green mobility standards
-

7. Operational & Maintenance Advantages

- No engine oil changes
- Fewer moving parts
- Reduced mechanical wear
- Lower maintenance frequency



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

- Improved vehicle uptime
- Extended service life

These features result in significantly reduced **total cost of ownership (TCO)** compared to conventional diesel vehicles.

8. Charging & Energy Efficiency

- Reduced charging cycles due to long-range capability
- Optimized energy utilization per kilometer
- Suitable for centralized depots and route-based operations
- Compatible with commercial fleet charging infrastructure

9. Applications

- Public transport authorities
- Municipal bus services
- Logistics and freight operators
- Intercity passenger transport
- Industrial and institutional fleet operators

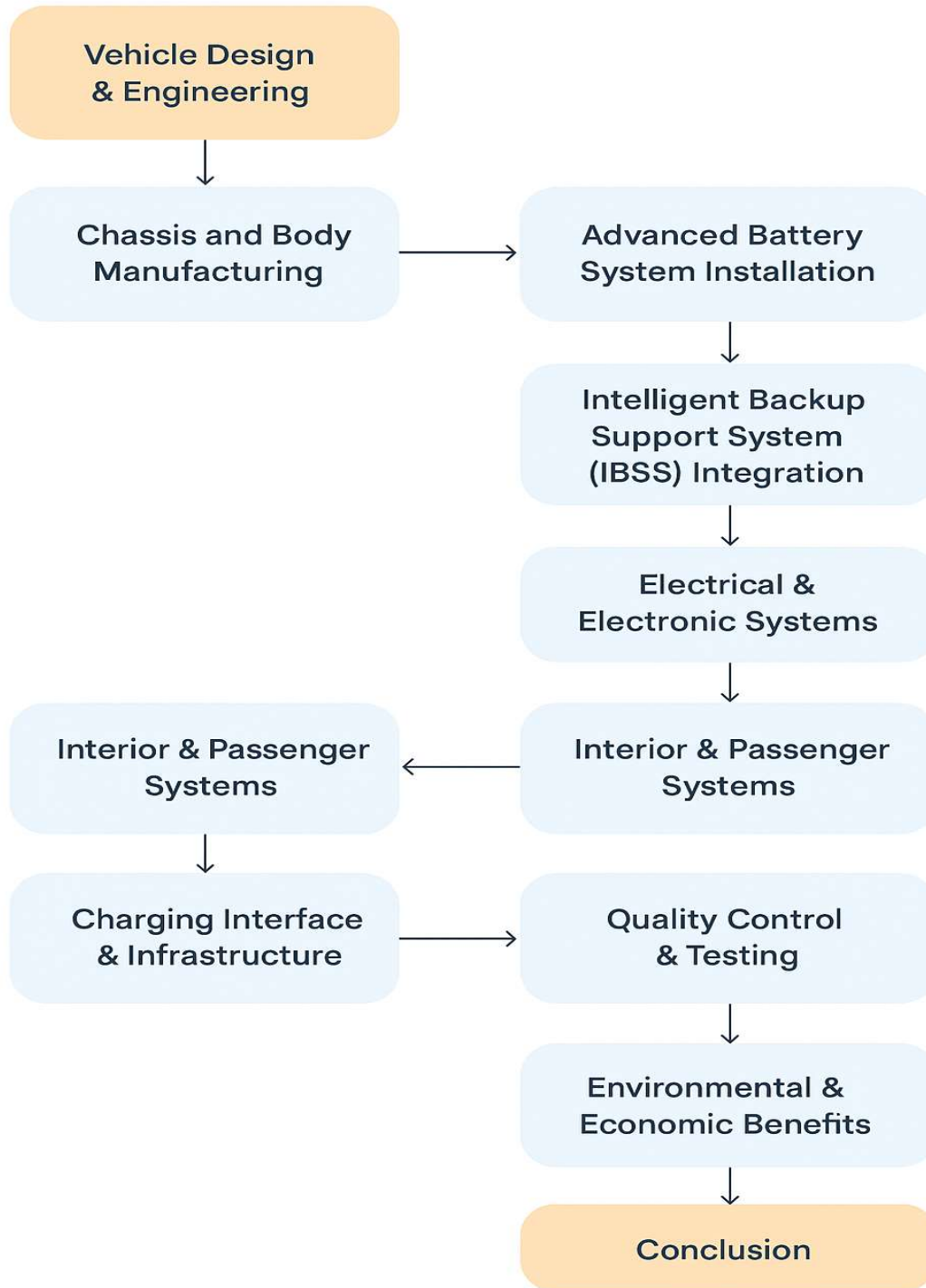
10. Key Technical Advantages

- ✓ 100% Electric & Zero Emission
- ✓ Long-Range (Up to 2,000 km per charge)
- ✓ Fuel-Free & Lubricant-Free
- ✓ Low-Noise Operation
- ✓ Reduced Operating Costs
- ✓ Designed for Commercial Duty Cycles

11. Deployment Status

- Technology: **Market-Ready**
 - Commercial Use: **Available for Fleet Integration**
 - Scalability: **Suitable for small, medium, and large fleets**
-

Manufacturing Unit Layout Plan





ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

ELECTRIC BUSES AND VEHICLES

Electric Bus Solution by BSHFMF Power Solution (Pvt) Ltd

BSHFMF POWER SOLUTION PVT LTD

CUTTING-EDGE EV TECHNOLOGY

Range: 1600 to 2000 km
Top Speed: 120 km/h
Intelligent Backup Sports System (IBSS)

Innovative Electric Vehicle Systems

At **BSHFMF Power Solution (Pvt) Ltd**, we are redefining the future of **commercial transportation** by delivering next-generation **electric vehicle (EV) systems** designed specifically for heavy-duty and high-utilization applications. Our mission is to accelerate the global transition to clean mobility by solving the most critical challenges faced by commercial EV operators—**range limitations, operational downtime, and cost efficiency**.

As an innovation-driven company, BSHFMF Power Solution entered the electric vehicle sector with a clear focus on **commercial EVs**, including **electric buses, trucks, and fleet vehicles**. From the outset, our research and development efforts have centered on creating intelligent systems that go beyond conventional battery-powered solutions and provide **real-world performance advantages** for public transport authorities, logistics companies, and large fleet operators.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Advanced EV System Engineering

Our electric vehicle solutions are built on a foundation of **high-performance engineering, smart energy management, and system-level integration**. Unlike traditional EV technologies that rely solely on battery capacity, BSHFMF Power Solution has developed proprietary systems that **optimize energy usage, extend operational range, and enhance vehicle reliability** without requiring structural modifications to the vehicle.

The result is a commercial EV ecosystem that:

- Maximizes daily driving range
- Reduces dependency on frequent charging
- Improves fleet availability and utilization
- Lowers long-term operational costs

Intelligent Backup Support System (IBSS)

A cornerstone of our EV innovation is the **Intelligent Backup Support System (IBSS)**, a breakthrough technology developed exclusively by BSHFMF Power Solution. IBSS is a smart, compact, and lightweight system that operates in **standby mode** and activates automatically to support the main battery when required.

Key advantages of IBSS include:

- **Extended driving range of 1600–2000 km on a single charge** for commercial EVs
- **Automatic activation at 60% battery level**, ensuring uninterrupted operations
- **No alteration or redesign of the vehicle**, enabling seamless retrofitting
- **Smart power management** for efficient energy delivery
- **10-year system warranty**, ensuring long-term reliability and confidence

This innovation addresses one of the largest barriers to EV adoption in commercial transport—**range anxiety**—making electric buses and trucks viable for long-distance, continuous-duty operations.

Focus on Commercial EV Applications

BSHFMF Power Solution’s EV technologies are purpose-built for:

- **Electric buses** for urban, intercity, and BRT systems
- **Electric trucks** for logistics, freight, and industrial transport
- **Commercial fleet vehicles** requiring high uptime and predictable performance

Our solutions allow operators to transition from diesel to electric mobility **without compromising on performance, scheduling, or profitability**.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Sustainable, Practical, and Profitable Mobility

By combining environmental responsibility with economic practicality, BSHFMF Power Solution enables governments, transport authorities, and private operators to:

- Reduce carbon emissions and fuel dependency
- Lower operating and maintenance costs
- Achieve energy security and operational resilience
- Scale EV adoption confidently and sustainably

Driving the Future of Commercial Electric Transport

Today, BSHFMF Power Solution stands at the forefront of **commercial EV innovation**, delivering **ready-to-deploy, market-proven technologies** that transform electric mobility from a concept into a scalable, profitable reality. Our continued investment in R&D, system optimization, and fleet-level solutions positions us as a trusted partner in the global shift toward clean and intelligent transportation. Key Features & Technological Advancements

1. Unmatched Range & Intelligent Backup Support

BSHFMF Power Solution's electric vehicle systems are engineered to deliver **exceptional driving range and uninterrupted operational performance**, setting new benchmarks in the commercial EV sector. Designed specifically for high-utilization fleets, our solutions address one of the most critical challenges in electric mobility—**range limitation and operational downtime**.

Industry-Leading Driving Range

Our EV systems offer an **unmatched operational range of approximately 1,600 to 2,000 kilometers on a single charge**, depending on vehicle configuration, payload, route profile, and operating conditions. This extended range enables commercial operators to:

- Complete long-distance and intercity routes without frequent recharging
- Reduce vehicle idle time and charging-related downtime
- Increase daily fleet utilization and route coverage
- Improve scheduling reliability for public and logistics transport

By significantly extending the distance achievable per charge, BSHFMF Power Solution ensures that electric vehicles can meet or exceed the operational expectations traditionally associated with diesel-powered fleets.

Intelligent Backup Support System (IBSS)

At the core of this performance advantage is BSHFMF Power Solution's proprietary **Intelligent Backup Support System (IBSS)**—a breakthrough innovation developed to enhance battery efficiency and operational resilience in commercial electric vehicles.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

IBSS operates as a **smart, on-demand backup power support system** that remains in standby mode during normal driving conditions. When the main battery reaches a predefined threshold—**typically between 60% and 80% state of charge**—the system automatically activates to support the vehicle’s energy requirements. This seamless transition ensures:

- Continuous vehicle operation without performance degradation
- Optimized battery usage and reduced stress on the primary battery
- Extended effective driving range without manual intervention

Seamless Integration & Performance Stability

One of the key strengths of IBSS is its **non-intrusive integration**. The system is designed to work alongside existing EV architectures without requiring structural changes or major modifications to the vehicle. This allows:

- Easy installation across various commercial EV platforms
- Compatibility with buses, trucks, and fleet vehicles
- Preservation of vehicle performance, safety, and drivability

IBSS delivers stable and controlled power support, ensuring that acceleration, load handling, and overall vehicle dynamics remain consistent throughout extended journeys.

Operational Reliability & Long-Term Assurance

To reinforce confidence in its technology, BSHFMF Power Solution provides a **comprehensive 10-year warranty** on the Intelligent Backup Support System. This long-term coverage reflects:

- High system durability and engineering quality
- Proven reliability under commercial operating conditions
- Reduced risk for fleet owners and public transport operators

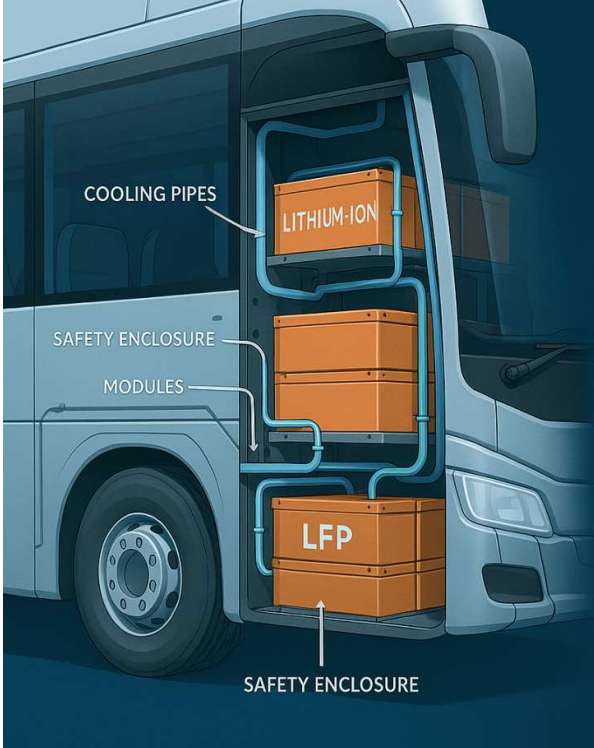
The warranty ensures predictable performance and protects long-term investments in electric mobility infrastructure.

Strategic Advantage for Commercial Fleets

By combining ultra-long-range capability with intelligent backup power management, BSHFMF Power Solution’s EV systems deliver a strategic advantage to commercial operators:


- Fewer charging stations required per route
- Lower energy and infrastructure costs
- Improved fleet availability and asset utilization
- Greater confidence in transitioning from diesel to electric transport

Advanced Battery Technology



LITHIUM-ION & LFP BATTERY MODULES

LITHIUM-ION	LFP
HIGH ENERGY DENSITY	LOW COST
LONGER RANGE	HIGH SAFETY
	LONG LIFESPAN



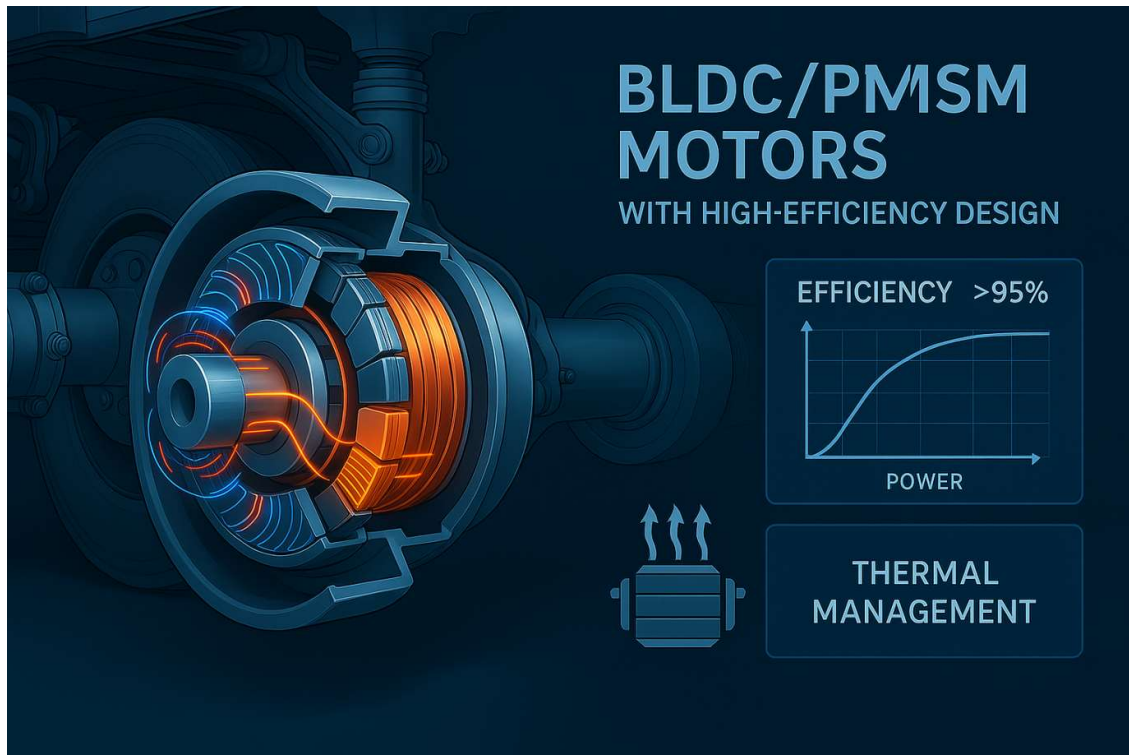
ADVANTAGES

- HIGH ENERGY DENSITY
- LONG LIFESPAN

We've engineered a dual-battery solution that harnesses the strengths of both Lithium-ion (Li-ion) and Lithium Iron Phosphate (LFP) technologies. This combination delivers optimal energy density for extended range, enhanced safety features, and remarkable longevity. Our AI-powered Battery Management System (BMS) takes performance to the next level with intelligent features including predictive maintenance algorithms, adaptive charging patterns, and real-time health monitoring - all working together to maximize battery life and efficiency.

S. No	Item Name	Details	Warranty	Life	Brand
1:	Batteries "Grayphene" Life04Po	300 kw	5 Years	10	BSHFMF
2:	After Sale Service in Pakistan	24/hrs. Help Line	2 Years		BSHFMF (Pvt) Ltd.

3. High-Efficiency Motor Systems



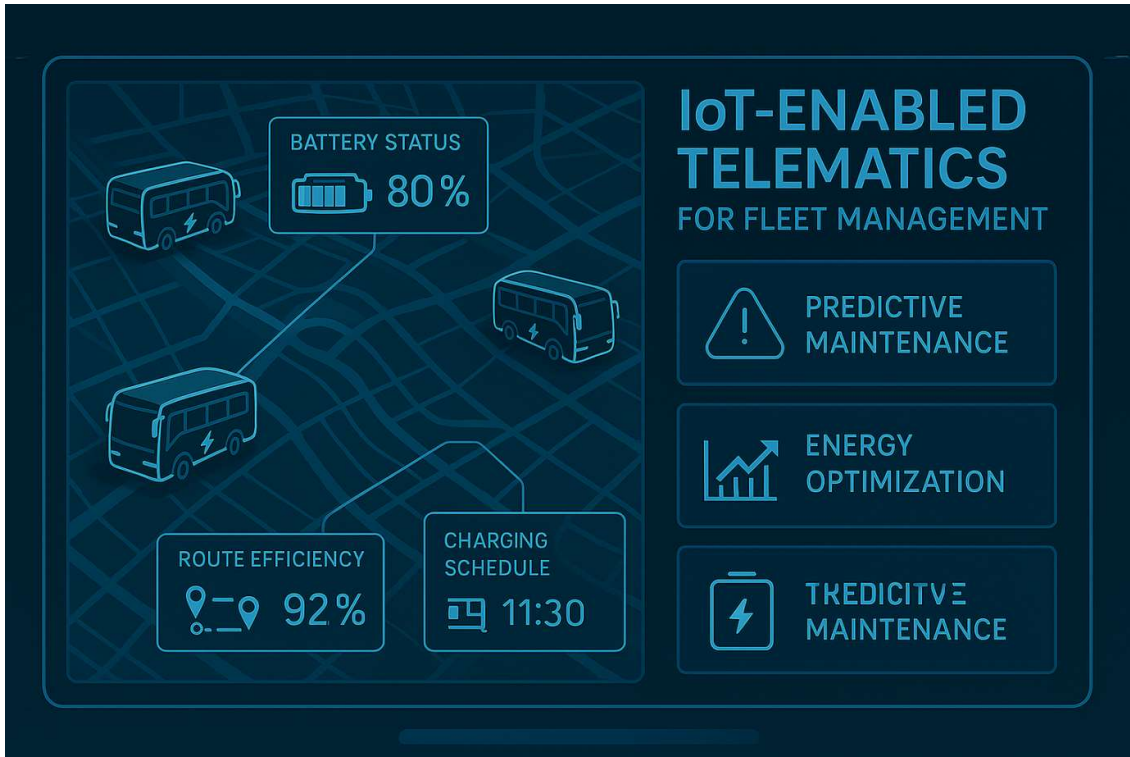
The heart of our EV systems lies in the advanced BLDC (Brushless DC) and PMSM (Permanent Magnet Synchronous Motors) technology. These motors achieve an exceptional efficiency rating of 95% or higher, delivering powerful torque output and smooth acceleration even under heavy loads. Designed specifically for commercial applications, our motor systems ensure reliable performance in the most demanding operating conditions.

4. Smart Fleet Management





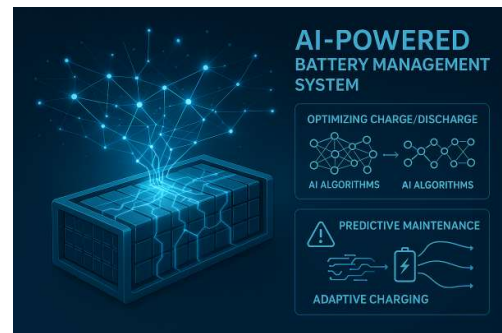
ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT



Our integrated IoT telematics platform transforms fleet management through real-time monitoring capabilities. Fleet operators gain instant visibility into vehicle health, energy consumption patterns, and optimal routing - all accessible through intuitive cloud-based interfaces. The system's energy regeneration

technology captures kinetic energy during braking, converting what would be wasted energy into additional range while simultaneously reducing wear on braking components.

Understanding the critical importance of uptime in commercial operations, we've developed rapid charging solutions that deliver a full charge in just 35–45 minutes using our advanced dual-nozzle charging systems. For even greater efficiency, our vehicles support integration with high-quality Italian solar panels, providing auxiliary charging capability that further reduces operational costs and enhances sustainability.





ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Vehicle Compatibility & Customization



ELECTRIC CITY BUS



INTERCITY ELECTRIC BUS



ELECTRIC TANKER/TRAILER

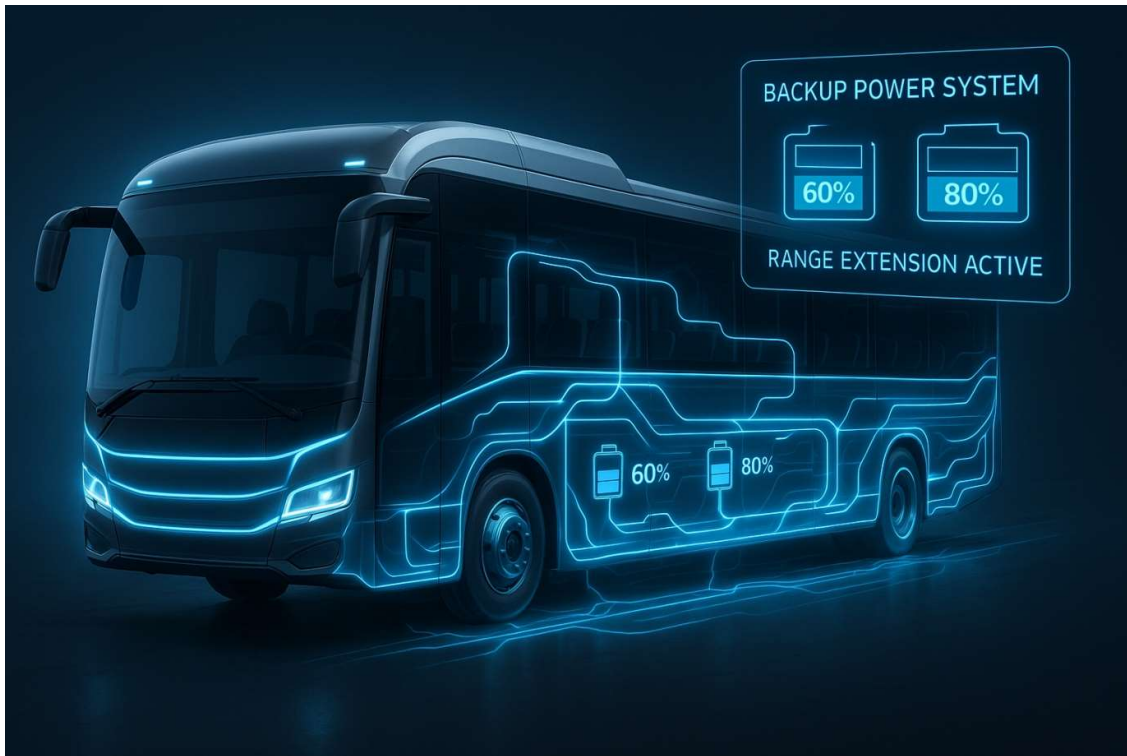


ELECTRIC TANKER/TRAILER

LONG RANGE TECHNOLOGY

We understand that every fleet has unique requirements, which is why we've developed modular systems that adapt to diverse applications. Our technology seamlessly integrates with passenger buses for both urban and intercity routes, cargo trucks of various sizes, heavy-duty trailers, and specialized construction vehicles. For operators with specific needs, we offer custom retrofit solutions and scalable systems that can grow with your fleet's evolving requirements.

Intelligent Backup Support System (IBSS)



Intelligent Backup Support System (IBSS)

At the core of **BSHFMF Power Solution (Pvt) Ltd's electric vehicle innovation** lies its flagship and proprietary technology—the **Intelligent Backup Support System (IBSS)**. IBSS is the defining feature that differentiates BSHFMF Power Solution from conventional EV solution providers and establishes the company as a pioneer in **commercial electric vehicle range-extension technology**.

Purpose and Vision of IBSS

The primary objective of IBSS is to **eliminate range anxiety and operational downtime** in commercial electric vehicles. Traditional EV systems rely solely on battery capacity, which often limits their practicality for long-distance, high-duty operations such as public transport, logistics, and intercity travel. IBSS was developed to overcome this limitation by providing **intelligent, on-demand backup power support**, ensuring uninterrupted vehicle operation under real-world commercial conditions.

Intelligent Backup Support System (IBSS)



How IBSS Works

IBSS functions as a **smart auxiliary power support system** that continuously monitors the vehicle's battery status through advanced control logic. The system remains in standby mode during normal operation and **automatically activates when the main battery reaches a predefined threshold**, typically between **60% and 80% state of charge**.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Once activated, IBSS:

- Supplies controlled backup energy to support the main battery
- Optimizes power distribution to maintain consistent vehicle performance
- Extends the effective driving range without overloading the primary battery
- Operates seamlessly without driver intervention

This intelligent operation ensures smooth energy transition, preventing sudden power drops or performance fluctuations.

Exceptional Range Extension Capability

One of the most significant advantages of IBSS is its ability to enable **ultra-long driving ranges of approximately 1,600 to 2,000 kilometers on a single charge**, depending on vehicle configuration, load, terrain, and duty cycle. This makes BSHFMF Power Solution's EV systems particularly suitable for:



- Long-distance and intercity bus routes
- High-mileage logistics and freight transport
- Continuous commercial fleet operations

By dramatically reducing the need for frequent charging, IBSS enhances fleet productivity and operational efficiency.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Seamless Integration Without Vehicle Modification

IBSS is designed for **non-intrusive integration** into electric vehicles. The system does **not require any structural modification or redesign** of the vehicle, allowing it to be installed in:

- New electric vehicles
- Existing EV fleets
- Multiple commercial vehicle platforms

This plug-and-play compatibility simplifies deployment and minimizes installation downtime.

Smart, Compact, and Lightweight Design

The system features a **compact and lightweight construction**, ensuring that it does not negatively impact vehicle payload capacity or balance. Despite its compact size, IBSS delivers powerful and reliable performance suitable for heavy-duty commercial use.

Enhanced Battery Protection and Longevity

By intelligently supporting the main battery, IBSS helps:

- Reduce deep discharge cycles
- Minimize battery stress and thermal load
- Improve battery lifespan and consistency

This contributes to lower replacement costs and improved long-term system stability.

Commercial-Grade Reliability and Warranty

BSHFMF Power Solution provides a **comprehensive 10-year warranty** on the IBSS, reflecting strong confidence in the system's durability and engineering quality. This long-term warranty:

- Reduces investment risk for fleet operators
- Ensures predictable operational performance
- Supports long-term fleet planning and financing

Operational and Economic Benefits

IBSS delivers measurable benefits to commercial EV operators, including:

- Reduced charging infrastructure dependency
- Lower operational and energy costs
- Increased daily vehicle availability



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

- Higher route reliability and service continuity

A Game-Changing EV Innovation

IBSS is not an add-on—it is a **core technological advantage** that transforms electric vehicles into **long-range, high-reliability commercial transport solutions**. By integrating intelligence, automation, and energy optimization into a single system, BSHFMF Power Solution has created a technology that redefines what commercial electric vehicles can achieve.

TECHNICAL DATASHEET & SPECIFICATION TABLE

Commercial Electric Vehicle Systems

BSHFMF Power Solution (Pvt) Ltd

1. System Overview

Parameter	Specification
Manufacturer	BSHFMF Power Solution (Pvt) Ltd
System Type	Commercial Electric Vehicle (EV) System
Primary Applications	Electric Buses, Electric Trucks, Electric Trains, Electric Hiace Vehicles
Energy Source	100% Electric
Emissions	Zero Emission (No CO ₂ , NO _x , PM)
Noise Level	Low-Noise Operation
Duty Cycle	Commercial / Heavy-Duty

2. Driving Range & Performance

Parameter	Specification
Driving Range	1,600 – 2,000 km per single charge
Range Dependency	Vehicle configuration, load, terrain, duty cycle



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Parameter	Specification
Charging Frequency	Significantly Reduced
Operational Mode	Continuous Commercial Operation

3. Intelligent Backup Support System (IBSS)

Parameter	Specification
System Name	Intelligent Backup Support System (IBSS)
Function	Smart backup power support for main battery
Activation Threshold	Automatically activates at 60% – 80% State of Charge
Operating Mode	Standby with automatic engagement
Integration	No vehicle modification required
Design	Compact and lightweight
Range Enhancement	Enables ultra-long range operation
Warranty	10 Years System Warranty

4. Electric Motor Specifications

Parameter	Specification
Motor Type	High-Efficiency Electric Motor
Torque Output	High torque at low RPM
Efficiency	Optimized for commercial-duty cycles
Thermal Management	Integrated cooling system
Maintenance	Minimal (No combustion components)
Application Suitability	Heavy loads, stop-start, long-haul

5. Motor Controller System

Parameter	Specification
Controller Type	Advanced Intelligent Motor Controller
Control Functions	Speed, torque, and acceleration control
Power Management	Real-time power modulation
Regenerative Braking	Supported
Protection Features	Overcurrent, thermal, voltage protection
Performance Impact	Smooth drive & improved efficiency

6. Battery Technology

Parameter	Specification
Battery Type	Advanced High-Capacity Battery System
Energy Density	High
Battery Management System (BMS)	Integrated intelligent BMS
Thermal Control	Active thermal regulation
Cycle Life	Long-life commercial grade
Safety Features	Overcharge, over-discharge, thermal protection

7. Energy Efficiency & Cost Benefits

Parameter	Specification
Fuel Requirement	None
Lubricants	Not Required
Operating Cost	Low per km
Maintenance Cost	Reduced
Total Cost of Ownership (TCO)	Significantly Lower vs Diesel



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

8. Environmental & Regulatory Compliance

Parameter	Specification
Tailpipe Emissions	Zero
Noise Pollution	Minimal
Renewable Energy Compatibility	Solar, Wind, Hydro
Compliance	Clean Transport & Green Mobility Standards

9. Deployment & Scalability

Parameter	Specification
Deployment Status	Market-Ready
Installation	New vehicles & existing EV fleets
Scalability	Small to large commercial fleets
Customization	Available based on vehicle type

10. Key Technical Advantages (Summary)

Feature	Benefit
Intelligent Backup Support System (IBSS)	Ultra-long range & uninterrupted operation
High-Efficiency Motor	High torque & energy savings
Advanced Controller	Smart power control & safety
Advanced Battery Technology	Long life & reliable performance
Integrated EV System	Commercial-grade reliability



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

11. Warranty & Support

Parameter	Specification
IBSS Warranty	10 Years
System Reliability	Commercial Grade
Technical Support	Available

Charging & Performance

Charging these electric vehicles is remarkably efficient. Buses equipped with a double nozzle can charge in just 35 minutes, while buses and trucks typically require 45 minutes for a full charge. The battery system features a 5,00 kWh capacity using high-quality Italian batteries with a lifespan of 10 years. To further enhance charging efficiency, Italian-brand solar panels are integrated into the system.

Performance-wise, these vehicles achieve a top speed of 140 to 180 km/h, with a normal cruising speed of 110 to 120 km/h, ensuring both efficiency and reliability for commercial operations.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

- Details of the Bus System (Engine)
- Bus/Truck Charging Time just 45 minutes.
- Bus/Truck Running Time 1600 – 2000 km at One Charge.
- Highest speed Up to 140 km.
- Normal Speed 110 km.
- Batteries Storage Capacity 300 KW.
- Battery Life 15 Years.
- Use Italian Brand Solar Panels for Improved Charging Capacity.
- Digital Storage Display & Manometer with 5 LED Lights (4 Green & 1 Red)
- Bus/Truck Completion Time 6 – 8 weeks.
- 24/hrs. Back up service by BSHFMF Power Solution (Pvt) Ltd.



PERFORMANCE & EFFICIENCY

- 60–80% operational cost savings
- High torque output with smooth acceleration
- Long battery life and fast charge cycles
- Regenerative braking reduces energy waste
- Designed for continuous, heavy-duty operation



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Warranty & Services

Customers benefit from a 3-year warranty on the electric engine and 1-year after-sale service. For uninterrupted operations, BSHFMF Power Solutions (Pvt.) Ltd offers 24/7 backup support, ensuring minimal downtime and maximum reliability.





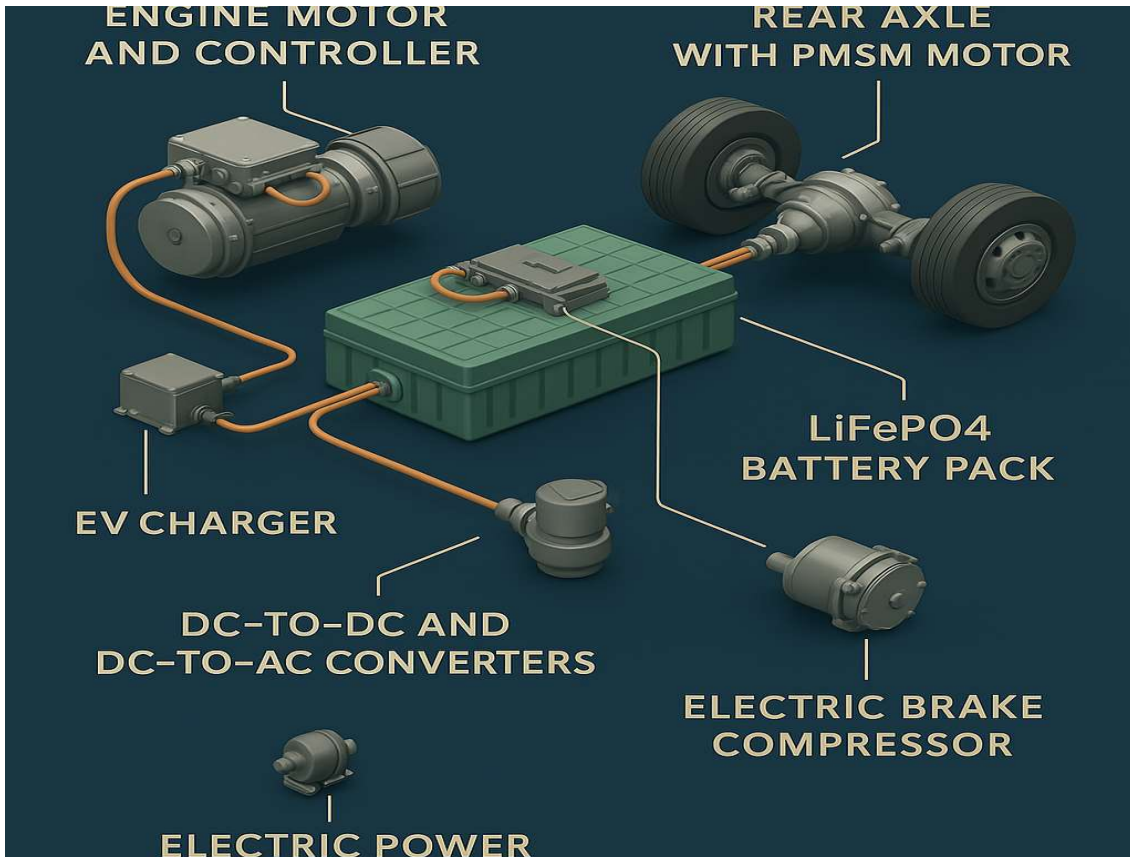
ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Production

The first vehicle conversion is completed within 90 working days, with a monthly production capacity of 100 to 500 buses or trucks. Each vehicle undergoes a rigorous trial period—4 weeks initially and 6 to 8 weeks post-completion—to ensure optimal performance and safety.

EV Components

The electric vehicle system includes a high-performance electric engine motor and controller, a rear axle with PMSM motor, and a durable LiFePO₄ battery pack with an advanced cooling system. Additional components include DC-to-DC and DC-to-AC voltage converters, an electric brake compressor, an electric power steering pump, and a high-efficiency EV charger.



Motor Specifications (BMC1540 300KW BLDC Motor)





ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Additional Notes

These electric vehicles are proudly made in Canada and are designed to meet the demands of high-efficiency public and commercial transport. With cutting-edge technology, extended range, and robust support systems, they represent the future of sustainable mobility.

Financing & ROI

A graphic titled 'Financing & ROI' with a light blue background. It features three icons in a row: a stack of coins with a dollar sign, a classical building representing a bank, and a car with a lightning bolt and a charging plug. Below these is a large icon of a blue bus on a road. To the right of the icons is a list of four bullet points.

- Bank loans and leasing programs available
- Expected ROI in 2-3 years
- Project financing for long-range electric bus conversions, EV charging stations, and hydroelectric systems
- Documentation and approval support for Canadian business expansion

Making the switch to electric has never been more accessible. We've established partnerships with leading financial institutions to provide attractive financing options for EV conversion projects. Most clients achieve complete return on investment within just 2–3 years through substantial fuel and maintenance savings. We offer flexible payment solutions including lease-to-own arrangements and customized EMI plans designed specifically for fleet operators.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Charging Infrastructure



5. Fast-Charging



EV Charger:



Size(W×D×H) : 800×740×1800mm
 Enclosure Rating : IP55
 Operating Temperature : -20°C~50°C
 Altitude : <2000m
 Relative Humidity : 0~95% (No condensation)
 Installation Mode: Fixed Installation
 MTBF : ≥8760h
 Input Voltage : 380±15%V
 Input Current : <260A
 Input Frequency : 50Hz±1Hz
 Input Power Factor : >0.99
 Output Voltage Range: DC 200~750V
 Output Voltage Range in Constant Power Mode: DC 600~750V

Output current range : 5~266A (The maximum output of a single gun is 250A)
 Ripple Coefficient : ≤±0.5%
 Current Sharing Coefficient : ≤±5%
 Stabilized Voltage Precision : ≤±0.5%
 Stabilized Current Precision : ≤±1%
 THD : ≤5%
 Efficiency : >94%
 Noise : 55~80dB
 Cooling Method: Forced fan cooling
 Connector Communication Mode: In accordance with GB/T27930-2015 standard
 Auxiliary power : 24V/12V (could be shift)
 Connector Output Mode: Dual-connector



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Why Choose BSHFMF?



BSHFMF
POWER SOLUTION PVT LTD.

ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

WHO WE ARE

BSHFMF Power Solution Pvt Ltd, based in Islamabad, Pakistan, is a leading innovator in electric vehicle technology for heavy transport. Under the technical supervision of Evonics Canada, the world's top-ranked EV company, we offer electric vehicle (EV) conversion systems, charging infrastructure, and zero-emission mobility solutions for buses, trucks, and trailers.



When you partner with BSHFMF, you're investing in proven technology backed by industry-leading warranties, including a 10-year battery life guarantee and 5-year engine warranty. Our dedicated support team is available 24/7 to ensure uninterrupted operations, providing peace of mind for your business. Most importantly, we're committed to future-ready mobility solutions that comply with evolving global standards, protecting your investment for years to come.



ELECTRIFYING THE FUTURE OF HEAVY TRANSPORT

Contact Information

BSHFMF Power Solution Pvt Ltd

House #8, 2nd Floor, Street 22/2A G-13/3, Islamabad

| info@bshfmf.com |

www.bshfmf.com

Sardar Gulam Mustafa:

Head: Asia Projects

[email address : projects@bshfmf.com](mailto:projects@bshfmf.com)

WORKSHOP ADDRESS

Al-Saeed Chowk Nain Sukh
Opposit Ravi Hotel, Shark Pur
Road Lahore



<https://maps.app.goo.gl/f5PMce>