Bagamati Provincial Government Technical Specifications of Fully Electrical Battery Operated Bus

S.	CRITERIA	DECRIBE OFFICE	OFFERED SPECIFICATION
1	General	for use as public transportation in city areas. Suitable to operate even in the rough, hilly road with steep slope/ sharp bends road condition of Nepal at ambient temperature varying between -5 to 50 degree centionade and altitude range up to 3000m.	Make: Model: Country of Origin;
2	Drive System/ Motor	Heavy duty, Single DrivePermanent Magnet Synchronous Motor (PMSM) having high power and torque density equipped with integrated controller system (to comply with latest IEC/NEMA or equivalent international standard) for optimization of Bus operation (constant torque and constant power mode of operation at various speed) Maximum power: Not less than 195 kW Maximum Torque not less than: 2500 N.m Efficiency: ≥ 80% Motor Protection level: At Least IP67	Make: Model: Test certification:
3	Battery / Energy Source	Energy storage on board the bus shall be adequate for intended application using latest technology available, to be equipped with Battery Management System (BMS) for optimization of Battery performance, status detection/ analyzing, energy control and constant monitor the Battery condition and ensure high level of safety protection. Battery type: Lithium Iron Phosphate (LFP) Battery Capacity: Not less than 250 KWh Driving range (In single full charge): Not less than 200 KM 12 or 24 V, 2*100 AH (At least battery capacity) Battery for electric appliances.	Make: Type: Model: Test certification:
4	Power train	Electric motor drive with efficient traction control system, enabling the reverse drive active only when vehicle at stationary.	
5	Cooling system	Liquid cooling system. The Battery compartment and other electrical/ mechanical component to be equipped with proven design of cooling and control system sufficient to maintain temperature within safe limit during the most severe operations possible.	The state of the s
6	Chassis/ Frame structure	Chassis and frame structure to be of manufacture's "proven design standard", suitably designed for maximum durability, high strength and corrosion resistance and fabricated, tested for same/similar load road and operating condition of Nepal and certified by authorized agency of country of origin. High impact resistant front and rear bumpers Heavy duty Towing hooks at front and rear.	Test certification:

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7	Body	Body of the Bus must be of proven design and tested (at GVW) for	Make:
		all types of loads that includes; static/ dynamic loads, bump loads.	Type/ Model:
		braking/ acceleration, frequent starts/stops. Aerodynamic design for	Test certification:
		energy efficiency, comfort with ease of boarding and exit and	
		meeting all safety requirements and comfort to all passengers	
		(seating + standee).	
		To be equipped with all necessary fitting and fixture items for	
	6	efficient, comfort and safe operation of Bus service that includes but	
		not limited to the followings:	
		Two Service passenger Doors Single in front and Double in	
		middle with suitable step well guards (at left-side of the Bus)	
		pneumatically operated inner swing door.	
- 1		Front single piece laminated safety glass Windshield with	
- 1		wipers and washers and rear tempered glass.	
		Toughen glass side Windows with inner guardrails built-in	
		air tight sliding window	
		Safety hammers with alarm function(At least 6 Nos.)	
		Overweight alarm function	
		City bus passenger seats made of high density plastic	
		Gangways minimum 600 mm	
		Handrails and Handholds (Hanging ring equipped 50pcs)	
		Antiskid floor	
		Insulated roof with adequate Internal ceiling height	
		Rear view mirror (Exterior/ interior)	
		Sun visors	
		Vertical stanchions	
		 Adequate ventilation system without opening windows. 	
		Ticketing system (Electronic)& Coin Machine	
		One 24" LED TV	
		Station display (LED type) above middle door with voice	
		messaging	
		Exterior Route Display (LED type) inFront and Rear.	
		Display Board in interior right and left ceiling side (At Least	
		6 Nos.)	
- 1		Digital Time & Temperature Display Unit	
		Stop Button in Vertical stanchions	
- 1		Ride Height	1
		Front End and Middle: 200-220 mm	
		Rear End : Minimum 450 mm	
		Detachable Dust Bins	
		Infotainment System with Radio, AM, FM,USB and	
		Bluetooth connectivity	
1	Air	The bidder required to offer Air conditioning:	
6	Conditioning	1. Bus equipped with Air conditioning system to be of adequate	
		capacity sufficient to maintain comfort to the passenger even at	
		adverse climatic/ temperature condition and frequent door	
		opening and closing. The minimum capacity not less than 24000	
		Keal/h cooling-heating (variable-frequency)	
)	Overall and	Dimensions:	
	other	Length: (10000 to 10500) mm	
	dimensions	Width: (2500 to 2600) mm	
ļ		Height: (3000 to 3500) mm	
		Wheelbase: (5500 to 6200) mm	
		Min. Ground Clearance (In Full Load Condition): 165 mm (High	\wedge
		Ground Clearance is Preferred)	
	100	Turning Radius: ≤12 m	4

10	Axles	Sturdy, reliable and proven designed front and rear axles with adequate capacity to carry maximum GVW load and crash loading.	
1	Steering	Power steering	
12	Brakes	Service brake: Dual circuit pneumatic system, front disc and rear drum type brake. Parking brake: Spring actuated Braking system to be equipped with Anti-Lock Braking System (ABS).	
13	Wheels &Tires	Standard Size-Single front, Dual rear and spare one with disc	
14	Suspension system	Suitably designed Multi Leaf Spring Type with heavy duty shock absorbers for trouble and jerk free comfort ride.	
15	Seating	Driver's seat: Comfortable, height adjustable cushioned seat with seatbelt. Passengers seat: Comfortable high density plastic seats suitable for city ride. Capacity: Minimum (34 + Driver) or 34 seats for passengers providing enough space for standee Total seating capacity: >85 including Standee Details of seating layout: Best fit arrangement	
16	Control Unit	Integrated master control unit for optimization of vehicle performance by coordinating all system/function with the operating condition of bus that includes cooling, battery management, motor drive system with facility of Real time data logging and monitoring, diagnostic.	
17	Vehicle Performance	Gross Vehicle Weight: Not less than 16.000kg Maximum grade ability: Not less than 15% Minimum Payload:5000kg MaximumSpeed: Not less than 65Km/hr Time to attain Bus speed of 0-30 km/h ≤ 10 sec	
18	Instrumentati on / Display unit	All necessary gauges, display unit to be equipped for monitoring performance, efficient operation and maintenance of vehicle that includes: • Vehicle health status • Battery health status • Motor performance • Fault warning • Safety feature • Display (live cameras) • Voice communication • Diagnostic and fault detection	

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19	Essential /	All standard accessories/ safety items to be equipped or supplied with	
	Safety	each Bus offered that includes but not limited to followings:	
	Accessories	- Head and tail lights	
		- Heater/defroster	
		- Fog lights	
		- Turn Signals	
		- Cabin light	
		- Reverse monitor screen	
		- Emergency siren	
		- Audio visual system	
		CCTV camera with recorder (At Least 7 Units including 2	
		Hidden Camera)	
		- GPS tracking system	
		- Built in Wi-Fi	
		Fire extinguisher 2*4Kg dry powder type First-aid kit	
		- Hydraulic jack 20 ton.	
		- Emergency Door Valves in both Doors	
20	Instructions	All signs and instructions in the Bus shall be in English.	
21	Manuals	The supplier shall provide the following documents to the end user	
	Manuals	when the Bus delivered at the site:	
		One copy of following manuals in English shall be supplied with	
		each bus	
		a) Operator's and Owner's Instructions and Maintenance manual	
		Two copies of following manuals in English shall be supplied	
		a) Comprehensive workshop manual	
		b) Spare parts catalogue	
22	Tools	A set of tools as required for general maintenance shall be supplied in	
		a lockable tool box with each unit of Bus. A list of standard tools to	
		be attached.	
23	Color/logo	The color of the Buses and The design and size of the logo shall be	
		provided to the bidders	
24	Proven	The bus offered shall be a current model under standard production	
	performance	by the manufacturer and under commercial operation as public	
		transport Bus for at least 3 (three) years.	
		Documentary evidence of running model from the user should also	
		be provided.	
		All applicable performance test certificates to be provided such as:	
		Electric shock test, Rainwater test, Performance test and others	3
		applicable tests.	
25	Warranty	Manufacturer shall provide warranty	
		Minimum of 6-year or 300000 km warranty on High Voltage Battery.	
		Driving motor, controller, Electric Pump, ECU Assembly and	
	12: 12:	Electric Appliances.	The second second second

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	Related Service	Training and Inspection Requirements As part of supplying the new buses the bidder is required to provide a comprehensive and appropriate program of training. The training modules shall include an overview of the bus system(s); how to install and configure spare components; and the procedures for preventative maintenance, inspection, fault diagnosis, component replacement, and warranty administration on each system component.
		The training should cover: a. At Purchaser's Premises (Delivery Site): Two weeks Training and familiarization of components and operation of the bus for (60) sixty persons (operator's and mechanics). The training content should cover all the necessary topics in operation, repair, maintenance both in theoretical and practical aspects essential to optimum use and proper repair and maintenance of the supplied buses that must include but not limited to following topics • General introduction and machine features • Operating system and safety features • Trouble shooting and diagnosis • Brake system, Cooling, Electric and Electronic system • Various Applications
27	Initial/ After sales services	Bidder is required to provide all necessary spare parts for regular and preventive maintenance to provide regular servicing, and all repair and maintenance services that include daily inspection, schedule inspection, preventive maintenance, condition monitoring and breakdown maintenance as necessary for smooth operation of Bus fleet for three years on bidders own cost. After sales service shall be provided by local agent/workshop dealer appointed by manufacturer in Kathmandu Nepal.
28	Delivery	Kathmandu

Charging Station

S.N.	CRITERIA	REQUIREMENT	OFFERED SPECIFICATION
1	Charging System	Complete set of Standard Compatible Chargerfor proposed vehicle with 2 (two) charging Guns (with source panel board and all the associated accessories), as per manufacturer recommendation. Make, model and detailed specification of the charger to be provided. The Vehicle Charging Unit must be a Long Range Quick Charge Unit with a commercially available plug-in charger that uses the international standard charging protocol (GB/1 or CCS2). The Contractor shall supply a battery charger unit for the City Transit Facility capable of recharging the electric bus propulsion batteries to a state (full charge) necessary for the bus to complete a 200 km circuit per charge. The plug-in charging station shall be capable of fully charging the bus within 1-2 hours.	

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Bagamati Provincial Government Technical Specifications of Fully Electrical Battery Operated Bus

i.	CRITERIA	REQUIREMENT	OFFERED SPECIFICATION
1	General	Right Hand Drive (RHD) Fully built Battery-operated Electric Bus for use as public transportation in city areas. Suitable to operate even in the rough, hilly road with steep slope/ sharp bends road condition of Nepal at ambient temperature varying between -5 to 50 degree centigrade and altitude range up to 3000m.	Make: Model: Country of Origin:
2	Drive System/ Motor	Heavy duty. Single Drive Permanent Magnet Synchronous Motor (PMSM) having high power and torque density equipped with integrated controller system (to comply with latest IEC/NEMA or equivalent international standard) for optimization of Bus operation (constant torque and constant power mode of operation at various speed) Maximum power: Not less than 150 kW Maximum Torque not less than: 1700 N.m Efficiency: ≥ 80% Motor Protection level: Atleast IP67	Make: Mode : Test certification:
3	Battery / Energy Source	Energy storage on board the bus shall be adequate for intended application using latest technology available, to be equipped with Battery Management System (BMS) for optimization of Battery performance, status detection/ analyzing, energy control and constant monitor the Battery condition and ensure high level of safety protection. Battery type: Lithium Iron Phosphate (LFP) Battery Capacity: Not less than 165 KWh Driving range (In single full charge): Not less than 200 KM 12 or 24 V, 2*100 AH (At least battery capacity) Battery for electric appliances.	Make: Type Model: Test certification:
4	Power train	Electric motor drive with efficient traction control system, enabling the reverse drive active only when vehicle at stationary.	
5	Cooling system	Liquid or Air-cooling system. The Battery compartment and other electrical/ mechanical component to be equipped with proven design of cooling and control system sufficient to maintain temperature within safe limit during the most severe operations possible.	Test certification:
6	Chassis/ Frame structure	Chassis and frame structure to be of manufacture's "proven design standard", suitably designed for maximum durability, high strength and corrosion resistance and fabricated, tested for same/similar load, read and operating condition of Nepal and certified by authorized agency of country of origin. High impact resistant front and rear humpers Heavy duty Towing hooks at front and rear.	Test certification:

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ks at front and rear.

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	Body	Body of the Bus must be of proven design and tested (at GVW) for all types of loads that includes: static/ dynamic loads, braking/ acceleration, frequent starts/stops. Aerodynamic design for energy efficiency, comfort with ease of boarding and exit and meeting all safety requirements and comfort to all passengers (seating + standee). To be equipped with all necessary fitting and fixture items for efficient, comfort and safe operation of Bus service that includes but not limited to the followings: Single Service passenger Door in front (at left-side of the Bus)pneumatically operated inner swing withsuitable step well guards and One Emergency Exit Door at right side rear end of the bus with suitable step well guardspneumatically operated outer swing door. Front single piece laminated safety glass Windshield with wipers and washers and rear tempered glass. Toughen glass side Windows with guardrails built-in air tight sliding window Safety hammers with alarm function (At least 6 Nos.) Overweight alarm function Gangways minimum 500 mm Antiskid floor Insulated roof with adequate Internal ceiling height Rear view mirror (Exterior/ interior) Sun visors Vertical stanchions Adequate ventilation system without opening windows. Ticketing system (Electronic) One 32" LED TV Station display (LED type) above middle door with voice messaging Exterior Route Display (LED type) in Front and Rear. Display Board in interior right and left ceiling side (At Least 6 Nos.) Digital Time & Temperature Display Unit Stop Button in Vertical stanchions Ride Height Front End and Middle: 200-220 mm Rear End: Minimum 450 mm Detachable Dust Bins Infotainment System with Radio. AM. FM.USB and	Make: Type/ Model: Test certification:
8	Air	Bluetooth connectivity The bidder required to offer Air conditioning:	
	Conditioning	Bus equipped with Air conditioning system to be of adequate capacity sufficient to maintain comfort to the passenger even at adverse climatic/ temperature condition and frequent door opening and closing. The minimum capacity not less than 24000 Kcal/h cooling-heating (variable-frequency)	
9	Overall and	Dimensions:	
	other dimensions	Length: (8500 to 9200) mm	
	diffictions	Width: (2300 to 2,600) mm Height: (3,000 to 3,500) mm	
		Wheelbase: (4200 to 5000) mm	
		Min. Ground Clearance (In Full Load Condition) : 160 mm (High)	
12		Ground Clearance is Preferred)	
		Turning Radius: ≤ 12 m	· .

rakes Theels Tires uspension eating	Service brake: Dual circuit pneumatic system, front disc and rear drum type brake. Parking brake: Spring actuated Braking system to be equipped with Anti-Lock Braking System (ABS) with Regenerative Braking System. Standard Size-Single front, Dual rear and spare one with disc Suitably designed Electronically Control Air Suspension (ECAS) with shock absorbers for trouble and jerk free comfort ride. Driver's seat: Comfortable, vertical & horizontal adjustable cushioned seat with seatbelt. Passengers seat:
Tires uspension estem	Parking brake: Spring actuated Braking system to be equipped with Anti-Lock Braking System (ABS) with Regenerative Braking System. Standard Size-Single front, Dual rear and spare one with disc Suitably designed Electronically Control Air Suspension (ECAS) with shock absorbers for trouble and jerk free comfort ride. Driver's seat: Comfortable, vertical & horizontal adjustable cushioned seat with seatbelt. Passengers seat:
Tires uspension estem	Suitably designed Electronically Control Air Suspension (ECAS) with shock absorbers for trouble and jerk free comfort ride. Driver's seat: Comfortable, vertical & horizontal adjustable cushioned seat with seatbelt. Passengers seat:
uspension estem	Driver's seat: Comfortable, vertical & horizontal adjustable cushioned seat with seatbelt. Passengers seat:
eating	Comfortable, vertical & horizontal adjustable cushioned seat with seatbelt. Passengers seat:
	Comfortable, adjustable folding cushioned seats suitable for long ride. Capacity: Minimum 26+ Driver Details of seating layout: 2X2
uggage pace	Enough Space for all passengers at suitable place
ontrol Unit	Integrated master control unit for optimization of vehicle performance by coordinating all system/function with the operating condition of bus that includes cooling, battery management, motor drive system with facility of Real time data logging and monitoring, diagnostic.
erformance	Gross Vehicle Weight: Not less than 9500 kg Maximum grade ability: Not less than 15 % Minimum Payload:4000kg MaximumSpeed: Not less than 80 Km/hr Time to attain Bus speed of 0-30 km/h ≤ 10 sec
nstrumentati n / Display nit	All necessary gauges, display unit to be equipped for monitoring performance, efficient operation and maintenance of vehicle that includes: • Vehicle health status • Battery health status • Motor performance • Fault warning • Safety feature • Display (live cameras) • Voice communication • Diagnostic and fault detection
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20	Essential / Safety Accessories	All standard accessories' safety items to be equipped or supplied with each Bus offered that includes but not limited to followings: - Head and tail lights - Heater/defroster - Fog lights - Turn Signals - Cabin light - Reverse monitor screen - Emergency siren - Audio visual system - CCTV camera with recorder (At Least 7 Units including 2 Hidden Camera) - GPS tracking system - Built in Wi-Fi - Fire extinguisher 2*4Kg dry powder type - First-aid kit - Hydraulic jack 20 ton Emergency Door Valves in both Doors	
21	Instructions	All signs and instructions in the Bus shall be in English.	
22	Manuals	The supplier shall provide the following documents to the end user when the Bus delivered at the site: One copy of following manuals in English shall be supplied with each bus a) Operator's and Owner's Instructions and Maintenance manual I wo copies of following manuals in English shall be supplied a) Comprehensive workshop manual b) Spare parts catalogue	
23	Tools	A set of tools as required for general maintenance shall be supplied in a lockable tool box with each unit of Bus. A list of standard tools to be attached.	
24	Color/logo	The color of the Buses and The design and size of the logo shall be provided to the bidders	
25	Proven performance	The bus offered shall be a current model under standard production by the manufacturer and under commercial operation as public transport Bus for at least three years. Documentary evidence of running model from the user should also be provided. All applicable performance test certificates to be provided such as: Electric shock test. Rainwater test. Performance test and others applicable tests.	
26	Warranty	Manufacturer shall provide warranty Minimum of 6-year or 300000 km warranty on High Voltage Battery. Driving motor, controller, Electric Pump, ECU Assembly and Electric Appliances.	

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27	Related Service	Training and Inspection Requirements As part of supplying the new buses the bidder is required to provide a comprehensive and appropriate program of training. The training modules shall include an overview of the bus system(s): how to install and configure spare components; and the procedures for preventative maintenance, inspection, fault diagnosis, component replacement, and warranty administration on each system component.
		The training should cover: a. At Purchaser's Premises (Delivery Site): Two weeks Training and familiarization of components and operation of the bus for thirty persons (operator's and mechanics). The training content should cover all the necessary topics in operation, repair, maintenance both in theoretical and practical aspects essential to optimum use and proper repair and maintenance of the supplied buses that must include but not limited to following topics • General introduction and machine features • Operating system and safety features • Trouble shooting and diagnosis • Brake system, Cooling, Electric and Flectronic system • Various Applications
28	Initial/ After sales services	Bidder is required to provide all necessary spare parts for regular and preventive maintenance to provide regular servicing, and all repair and maintenance services that include daily inspection, schedule inspection, preventive maintenance, condition monitoring and breakdown maintenance as necessary for smooth operation of Bus fleet for three years on bidders own cost. After sales service shall be provided by local agent/workshop/dealer appointed by manufacturer in Kathmandu Nepal.
29	Delivery	Kathmandu, Nepal

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S. N.	CRITERIA	REQUIREMENT	OFFERED SPECIFICATION
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4	Power train	Electric motor drive with efficient traction control system, enabling the reverse drive active only when vehicle at stationary.	
5	Cooling system	Liquid cooling system. The Battery compartment and other electrical/ mechanical component to be equipped with proven design of cooling and control system sufficient to maintain temperature within safe limit during the most severe operations possible.	Make: Model: Test certification:
6	Chassis' Frame structure	Chassis and frame structure to be of manufacture's "proven design standard", suitably designed for maximum durability, high strength and corrosion resistance and fabricated, tested for same/similar load, road and operating condition of Nepal and certified by authorized agency of country of origin. High impact resistant front and rear bumpers Heavy duty Towing hooks at front and rear.	Make: Type/ Model: Test certification:

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at front and rear.

8	Air	Body of the Bus must be of proven design and tested (at GVW) for all types of loads that includes; static/ dynamic loads, bump loads, braking/ acceleration, frequent starts/stops. Aerodynamic design for energy efficiency, comfort with case of boarding and exit and meeting all safety requirements and comfort to all passengers (seating + standee). To be equipped with all necessary fitting and fixture items for efficient, comfort and safe operation of Bus service that includes but not limited to the followings: Two Service passenger Doors Single in front and Double in middle with suitable step well guarcs (at left-side of the Bus) oneumatically operated inner swing door. Front single piece laminated safety glass Windshield with wipers and washers and rear tempered glass. Toughen glass side Windows with guardraits built-in air tight sliding window Safety hammers with alarm functior (At least 6 Nos.) Overweight alarm function City bus passenger seats made of high density plastic Gangways minimum 600 mm Handrails and Handholds (Hanging ring equipped 40 pes) Antiskid floor Insulated roof with adequate Internal ceiling height Rear view mirror (Exterior/ interior) Sun visors Vertical stanchions Adequate ventilation system without opening windows. Ticketing system (Electronic) & Coin Machine One 24" LED TV Station display (LED type) above middle door with voice messaging Exterior Route Display (LED type) in Front and Rear. Display Board in interior right and left ceiling side (At Least 6 Nos.) Digital Time & Temperature Display Unit Stop Button in Vertical stanchions Ride Height Front End and Middle: 200-220 mm Rear End: Minimum 450 mm Detachable Dust Bins Infoainment System with Radio. AM, FM,USB and Bluetooth connectivity The bidder required to offer Air conditioning.	Make: Type/ Model: Test certification:
	Conditioning	Bus equipped with Air conditioning system to be of adequate capacity sufficient to maintain comfort to the passenger even at adverse climatic/ temperature condition and frequent door opening and closing. The minimum capacity not less than 24000 Kcal/h cooling-heating (variable-frequency)	
9	Overall and other dimensions	Dimensions: Length: (8500 to 9200) mm Width: (2300 to 2,600) mm Height: (3,000 to 3,500) mm	1
		Wheelbase: (4200 to 5000) mm Min. Ground Clearance (In Full Load Condition): 160 mm (High Ground Clearance is Preferred)	

11	Steering	Power steering		
12	Brakes	Service brake: Dual circuit pneumatic system, front disc and rear drum type brake. Parking brake: Spring actuated Braking system to be equipped with Ami-Lock Braking System (ABS).		
13	Wheels & Tires	Standard Size-Single front, Dual rear and spare one with disc		
14	Suspension system	Suitably designed Multi Leaf Spring Type with shock absorbers for trouble and jerk free comfort ride.		
15	Seating	Driver's seat: Comfortable, height adjustable cushioned seat with seatbelt. Passengers seat: Comfortable high density plastic seats suitable for city ride. Capacity: Minimum (30 + Driver) or 30 seats for passengers providing enough space for standee Total seating capacity: > 70 including Standee Details of seating layout: Best fit arrangement		
16	Control Unit	Integrated master control unit for optimization of vehicle performance by coordinating all system/function with the operating condition of bus that includes cooling, battery management, motor drive system with facility of Real time data logging and monitoring, diagnostic.		
17	Vehicle Performance	Gross Vehicle Weight: Not less than 11000 kg Maximum grade ability: Not less than 15 % Minimum Payload;4000kg MaximumSpeed: Not less than 69 Km/hr Time to attain Bus speed of 0-30 km/h ≤ 10 sec		
18	Instrumentati on / Display unit	All necessary gauges, display unit to be equipped for monitoring performance, efficient operation and maintenance of vehicle that includes: • Vehicle health status • Battery health status • Motor performance • Fault warning • Safety feature • Display (live cameras) • Voice communication • Diagnostic and fault detection		

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19	Essential / Safety	All standard accessories/ safety items to be equipped or supplied with each Bus offered that includes but not limited to followings:	
	Accessories	- Head and tail lights	
		- Heater/defroster	
		- Fog lights	
		- Turn Signals	
		- Cabin light	
1	165	Reverse monitor screen	
		- Emergency siren	
		- Audio visual system	
		- CCTV camera with recorder (At Least 7 Units including 2	
		Hidden Camera)	
		- GPS tracking system	
		- Built in Wi-Fi	
		- Fire extinguisher 2*4Kg dry powder type	
		- First-aid kit	
		Hydraulic jack 20 ton. Emergency Door Valves in both Doors	
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20	Manuals	The supplier shall provide the following documents to the end user	
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		each bus	
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		a) Comprehensive workshop manual	
		b) Spare parts catalogue	
22	Tools	A set of tools as required for general maintenance shall be supplied in	
		a lockable tool box with each unit of Bus. A list of standard tools to	
		be attached.	
23	Color/logo	The color of the Buses and The design and size of the logo shall be	
		provided to the bidders	
24	Proven	The bus offered shall be a current model under standard production	
	performance	by the manufacturer and under commercial operation as public	
	11	transport Bus for at least three years.	
		Documentary evidence of running model from the user should also	
		be provided.	
		All applicable performance test certificates to be provided such as:	
		Electric shock test, Rainwater test. Performance test and others	
25	Winner	applicable tests. Vanufacturer shall provide warranty	
25	Warranty	Minimum of 6-year or 300000 km warranty on High Voltage Battery.	
		Driving motor, controller, Electric Pump, ECL Assembly and	
		Electric Appliances.	
	^ A	Licente Appliances.	

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26	Related Service	Training and Inspection Requirements As part of supplying the new buses the bidder is required to provide a comprehensive and appropriate program of training. The training modules shall include an overview of the bus system(s): how to install and configure spare components; and the procedures for preventative maintenance, inspection, fault diagnosis, component replacement, and warranty administration on each system component.
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27	Initial: After sales services	Bidder is required to provide all necessary spare parts for regular and preventive maintenance to provide regular servicing, and all repair and maintenance services that include daily inspection, schedule inspection, preventive maintenance, condition monitoring and breakdown maintenance as necessary for smooth operation of Bus fleet for 3 (three) years on bidders own cost. After sales service shall be provided by local agent/workshop/dealer appointed by manufacturer in Kathmandu Nepal.

अजि मिति २ ७६६ साल सेत्र ७५ जातेका दित विद्युत्तीय सवारी साध्यव संवालव सम्बद्धी सह्जिक्करण समितिका संजीक्षक तथा प्रवेद्वा सभा सांसद माननीय भी दिपक निरोंका ज्यूकी अध्यक्षतामा सहजीकरण सामितिका पदाधिकारी तथा यस अन्तरगत्का उपसामिति पदाधिकारीहटकी संयुक्त वैष्ठक भौतिक पूर्वाधार विकास मन्त्रालयको सभा हलमा बसी तपाशिका महादभाषहको उपाधातिमा वसी छलडल तथा विक्रीसह्य जारियो:

उपास्थिति:		
स्वदेष. माननीय श्री दिपक तिरोला	संघोत्रक	प्रवेश सभा सांसव
्रा क. इर श्री मुद्धत्व ग्रसाव पडिल	सव स्य	साचिव, आ भा तद्या यो भ
श्री तेजराज शह	9	साच्या, भौ प्राचि म
र्भि ४ अर्ग हिर प्रसाद डपाइथाय	"	प्रमुख, प्र-ले नि ना
अर्थ भी मीटल लहाइन् चित्र	1,	अव्यक्, ठा-म-म-पा-गामें ४
(a. अर्ग सुमत प्रसाद कामी	ri	र्वरिव मिल
७. श्री वसत्त आचार्य	11	द्धाः मः प्रमुख, काः मः मः पाः
किते र श्री पुरुषोतम व्याक्य	71	म प्रमुख, यख रया ठपकरण
इ. अने विधित कुमार ठाकुर	н	में । कि हि ई श्वा धा तथा दल वर्ष वि
90 श्री विद्याट हिमित्रेर	11	भि प्रमुख - अरमपुर् भ-ब-धाः
99 श्री लक्ष्मण पालिखेल	-11	उप-द्राध्यक्षक - लापालली म्यामास
AL 92. श्री वर वहाड्र महर्तन	1.1	में ई - या बिक ता - हे - लारतपुर
(a3. र्शि लापित समार शिंह	स्वस्य स	चिव - राष्ट्रः भरे-दुः वि . भ
विकि १४ असि वहाइन भएडारी	शास्त्र	সোধিক ল-

हिरामान्तिः:

र श्री अन्तुप पौडेल प्रमुख स्मधीयस्थिन माः मुख्यम्नीज्य निः मुख्यम्नीज्य माः मुख्यम्नीज्य निः मुख्यम्नीज्य नाः मुख्यम्नीज्य नाः प्रः निर्देश्वानालयः । अः अः अः अः प्रः निर्देश्वानालयः । अः अः अः प्रस्ति निः मिर्देश्वाने । अः प्रः निर्देशानालयः । अः अः प्रसाद निन्ताहो नामपा निस्तापिति होयोपन्ड । अः प्रश्ति मन्तालयः । अः प्रसाद प्रसाव प्रसाल । अः विश्वानालयः । अः प्रस्ति । अः प्रसाद प्रसाल । अः विश्वानालयः । अः प्रसाद प्रसाल । अः विश्वानालयः । अः प्रसाद प्रसावः । अः प्रसाद । अः प्

निर्णयहरुः १८००१

आज मिति २०७६।१२।०५ गतेका दिन विद्युत्तीय सवारी साधन संचालन सम्बन्धी सहजीकरण समिति र यस अन्तरगत गठन भएका दुईवटा उपसमितिका संयोजक तथा सदस्यहरूको संयुक्त बैठक माननीय श्री दिपक निरौलाज्यूको अध्यक्षतामा यस मन्त्रालयको सभा हलमा बसी बैठकको एजेण्डा उपर छलफल गर्दा तपशिल बमोजिमको निर्णय गरियोः

छलफलका विषय:

- प्राप्त स्पेशिफिकेशन सम्बन्धमा
- २. अन्य विविध

तपशिल:

निर्णय नं.१. विद्युत्तीय साधन (सवारी साधन र सरसफाई उपकरण) छुनौट तथा खरिद उपसमितिबाट १० मिटर देखि १० ४ मिटरसम्मको सिटी बस, ६ ४ मिटर देखि १ मिटर सम्मको सिटी बस र लामो दिरमा (उपत्यका बाहिर) संचालन गनंको लागि ६ ४ मिटर देखि १ मिटर सम्म लम्बाईका कोच्यसहरुको प्राविधिक स्पेसिफिकेशन मूल समितिमा प्राप्त भयो । उक्त उपसमितिबाट पंश भएको स्पेसिफिकेशनको अन्तिम रुपलाई समर्थन गरी विद्युत्तीय सवारी साधनहरुको खरिद प्रकृयाको लागि भौतिक पूर्वाधार विकास मन्त्रालयमा पेश गर्ने निर्णय गरियो ।