

Type D Electric bidReport

	Dynamic Specialty Vehicles	The Lion Electric Co
Completion Date (Time Period)	days	days
Defined Prices:		
SECTION TOTAL:	0	0
Combined Prices:		
Separate Prices:		
Alternate Prices:		
Unit Prices:		
Cash Allowances or Other Stipulated Sums:		
Sub Trade List Description:		
Bus Unit Price:		
Type D ( 80+ Passenger or Maximum Capacity ). All units and components must meet Federal and Provincial regulations and requirements and current D250.	451670	371650
Base Bus Specifications: Body:		
1. Full power steering - minimum 18" diameter steering wheel Tilt steering column telescopic	Yes	Yes
1. Additional Information		
2. Aluminized Interior Steel Walls Head Room - 77" Subfloor - 5/8" plywood Rubber covered light coloured ribbed in aisle Floor materials to be covered to sidewalls	Yes	Yes
2. Additional Information		
3. Wheel housings to be molded type and fully covered All joints to be silicone sealed - including sidewalls and perimeter	Yes	Yes
3. Additional Information		
4. Mud flaps Installed on front and on rear wheels rubber fenderettes on all four (4) wheel wells	Yes	Yes
4. Additional Information		
5. Exterior paint to meet national school bus yellow standard black rub rails light colour interior	Yes	Yes
5. Additional Information		
6. Exterior Lettering 6" - (Purchaser name) both sides at belt line 4" - Bus # two front corners and opposite license plate rear	Yes	Yes
6. Additional Information		
7. Exterior Lettering con't 2" - Capacity GVW (Purchaser name) on side panel back of entrance door and side panel below driver	Yes	Yes
7. Additional Information		
8. Internal signs over windshield - No Smoking - No Standees	Yes	Yes
8. Additional Information		
9. Body fully undercoated for noise and enhanced rust protection	Yes	Yes

Type D Electric bidReport

	Dynamic Specialty Vehicles	The Lion Electric Co
9. Please describe what is included and optional levels of protection available including costs	Asphalt emulsion undercoating included. Options: Premium Undercoat Sulfonate Enhanced DTM Modified Wax coating. Replaces the standard asphalt emulsion. Provides approx twice the performance in highly corrosive environments where de-icing chemicals are prevalent. \$350 Premium Fuel Tank Undercoat-Wax based undercoat over std black powdercoat for the fuel tank. Provides increased corrosion resistance. Salt spray hours increase from 240 to 2000 hrs with this coating. \$195	Undercoating for noise and enhanced rust protection is a standard feature on all our vehicles and is part of our enhanced customer experience to ensure a long-lasting anti-corrosion vehicle
10. Crossing arm deactivation switch	Yes	Yes
10. Additional Information		
11. Tinted windshield wipers dual electric with intermittent control Windshield washers with wet arm windshield washer tank 2 litres minimum	Yes	Yes
11. Additional Information		
12. Split sash side windows tinted	Yes	Yes
12. Additional Information		
13. All emergency exits to be vandal lock equipped	Yes	No
13. Additional Information		All emergency doors to be vandal locked other equipped with buzzers
14. Two (2) roof emergency escape hatches	Yes	Yes
14. Additional Information	included	Standard
15. Entrance door to be air or electric operated with an emergency release valve mounted outside. Both doors heavy duty split type windows in upper and lower sections to open outward	Yes	Yes
15. Additional Information	Air control included electric option available.	
16. Entrance steps covered white trimmed with assist rails right and left side	Yes	Yes
16. Additional Information		
17. Body insulation including walls ceiling and roof bows - to be fibreglass or equivalent Dust intrusion package on underside of bus up to floor joint	Yes	Yes
17. Additional Information		
20. Power to accessory side of ignition	Yes	Yes
20. Additional Information		
21. Circuit breakers	Yes	Yes
21. Additional Information		
22. Instruments: Dash mounted hr meter Battery Monitor speedometer in kmh c/w odometer in km Range (2) air pressure gauges if air equipped	Yes	Yes

Type D Electric bidReport

	Dynamic Specialty Vehicles	The Lion Electric Co
22. Please describe Instrumentation and dash cluster provided	Please refer to attached EV Instrument cluster.pdf for diagram and details. Speedometer Efficiency Gauge Message Display Center State of Charge (SOC) Motor Temperature Battery Temperature Front Air Gauge Rear Air Gauge Left Warning Area Right Warning Area Message Display Center Control Panel Center Warning Bank	Please refer to narrative.
23. Instrument panel shall be illuminated and include text light indicators monitoring both the amber and red light warning activations; lcruise control activation cruise control	Yes	Yes
23. Additional Information	Please refer to attached EV Instrument cluster.pdf for diagram and details.	No cruise control available for now
24. 12 volt power point in switch panel	Yes	Yes
24. Additional Information		
25. Back-up alarm	Yes	Yes
25. Additional Information		
26. Two (2) LED strobing stop arms - mounted front and rear driver's side with wind guards.	Yes	Yes
26. Additional Information		
27. Driver alert system installed on battery door	No	Yes
27. Additional Information		Childcheckmate is standard
28. Front headlights HD all exterior lights to be LED cluster lights: front and rear - six (6) in total LED 8 light system non-sequential with master switch and visors	Yes	Yes
28. Additional Information		
29. Two (2) rows of interior lights front and rear half on separate dimmer switches	Yes	Yes
29. Additional Information		
30. One (1) driver's light on separate switch	Yes	Yes
30. Additional Information		
31. Interior rear view mirror and sun shield. Minimum 6" to maximum 10" x 30" with no obstruction of windshield	Yes	Yes
31. Additional Information		
32. Right and left side primary and convex mirrors; remote adjustable Exterior convex crossovers self-defrosting mounted on right and left sides	Yes	Yes
32. Additional Information		
33. Two (2) heavy duty auxiliary windshield defroster fans switched separately one for each windshield. To cover full width of windshield and drivers left side window. Heavy duty defroster motors.	Yes	Yes
33. Additional Information		
34. Defroster approximately 90 000 BTU capable of clearing front windows	Yes	Yes
34. Additional Information		

Type D Electric bidReport

	Dynamic Specialty Vehicles	The Lion Electric Co
35.School buses must be equipped with heating units and be able to sustain 15.5 degrees C (plus or minus 2 degrees) inside the vehicle when the outside temperature is 0 degrees C ambient. Heaters should not decrease vehicle range by more than one percent. Please describe achievable in vehicle temperature when outside temperature is -30C and provide the expected impact of heating the interior cabin temperate on vehicle range especially when outside temperature conditions are very cold.	Yes	Yes
35. Additional Information	Please refer to attached Type D EV Bus Spec Response.pdf	Please refer to narrative.
36.Vendors should describe their proposed heating systems including fuel source and flexibility to accommodate different fuel types as requested by local school district. " The use of electric heaters to pre-heat the vehicle cabin is not preferred; however using electric heat to keep the batteries warm is acceptable. Vendors should also describe their proposed system for pre-heating vehicle cabins.	Yes	Yes
36. Additional Information	Please refer to attached Type D EV Bus Spec Response.pdf	Please refer to narrative.
37. One (1) heater unit for driver's control area (transit type) - 10 000 BTU min.	Yes	Yes
37. Additional Information	Yes a dedicated 12 000 BTU driver's heater on RE.	
38. First Aid kit fire extinguisher flare kit all mounted in overhead compartment.	Yes	Yes
38. Additional Information		
39. Driver's seat to be deluxe high back air seat fully adjustable - 6-way with lumbar support and fold down arm rests. Air foam rubber filled with heavy duty covering cloth fabric.	Yes	Yes
39. Additional Information		
40. Passenger seats to be seat belt ready 3x3 seating on both sides. Seats to be wall mounted on one side All seat coverings to be HD fire resistant gray vinyl.	Yes	Yes
40. Additional Information		
41. Pre-wired power and ground thru noise suppression circuit for 2-way radio	Yes	Yes
41. Additional Information		
42. AM/FM/PA radio and CD player	Yes	Yes
42. Additional Information		
43. PA system with six (6) interior and one (1) exterior speakers separately controlled	Yes	Yes
43. Additional Information		
44. Each unit shall be equipped with a Sound Generator that complies with FMVSS and CMVSS 141	No	Yes
44. Additional Information	CMVSS 141 compliance is in progress	Lion has added a sound generator outside the bus to ensure that students parents and technicians hear the bus when it is driving. In fact the bus is so quiet that it could easily be on without anyone knowing which could be dangerous in school bus yards or at schools.
Base Bus Specifications: Chassis:		
1. Chassis and Body Year	Blue Bird 2021	2021-2022

Type D Electric bidReport

	Dynamic Specialty Vehicles	The Lion Electric Co
2. Propulsion system - vehicle performance include: A sustained speed of 70 kph on a 2.5% grade; and 20 kph on a 20% grade. An ability to accelerate to 20 kilometers per hour (kph) in four seconds; to 40 kph in 10 seconds; 50 kph in 20 seconds and 70 kph in 35 seconds. Expectations are that the school bus shall be cable of a minimum of 200 kilometer range on a single battery charge on route measured with 50% city miles and 50% highway miles. Vehicles should be capable of operating at minus 30 degrees Celsius (-30C) to 35C with limited loss of range (no more than 10% reduction of documented range) in these variable conditions. This range rating must be tested with all normal accessories running in the conditions described including terrain encountered in BC.	Yes	Yes
2. Describe vehicle performance while fully loaded in terms of maximum operating speed grade-ability and acceleration. Please provide documentation of for verifying submitted vehicle performance claims to meet above performance specifications.	Please refer to attached Type D EV Bus Spec Response.pdf	Please refer to narrative.
3. Vehicles should have the ability to change the powertrain deferential ratio to maximize range performance in mountain routes city routes highway routes or a combination of mountain city and highway routes. Please describe your process for achieving this?	Yes	Yes
3. Additional Information	Fixed differential 5.29 drive axle ratio	It is possible to adjust the speed vs the torque on our vehicles to adapt to hilly vs highway school districts. We have been able to perform this adjustement across North America to optimize the performance on our vehicles.
4. Air Brakes - Rear drum: 16½" x 8"; Front drum: 16½" x 6" with dust shields. Auto slack adjusters long stroke S cam type brakes. ABS included. Auxiliary Equipment tank right hand remote drain	Yes	Yes
4. Additional Information		Standard
5. High capacity dry type air cleaner c/w air restriction gauge to be mounted on dash or air intake	Yes	Yes
5. Additional Information		Underhood gauge
6. Regenerative braking to charge batteries must meet all Canadian Motor Vehicle Safety Standards in regards to braking systems	Yes	Yes
6. Additional Information		

Type D Electric bidReport

	Dynamic Specialty Vehicles	The Lion Electric Co
9. BATTERY - Vendors should describe their proposed energy storage/battery system including the number of battery packs and battery chemistry. " Battery efficiency (kilometers per kWh) " Time (in minutes) to charge batteries from 20% to 100% state of charge on a level 2 charger. " Time (in minutes) to charge batteries from 20% to 80% state of charge on a level 2 charger. " Battery capacity (amps per hour per cell) " Battery storage capacity (kWh) " Total usable battery energy storage capacity (kWh) " Total battery pack C-rate. " Total battery pack E-rate " Battery Cycle Life in number of charge-discharge cycles at a specific depth of discharge (DOD) " Battery thermal management type (describe battery maintenance and operational requirements when vehicle is in use and not in use	Yes	Yes
9. Additional Information	Please refer to attached Type D EV Bus Spec Response.pdf	Please refer to narrative.
10. Battery Management System	Yes	Yes
10. Must be described	Please refer to attached Type D EV Bus Spec Response.pdf	Please refer to narrative.
11. Front axle - 14 000 lb taper leaf set back. Rear axle - 23 000 lb - performance chart must be supplied Rear axle ratio - Please specify options available Specify turning radius.	Yes	Yes
11. Additional Information	Rear axle 23 000lb Ratio 5.29 Turn radius W-W:37 <sup>9</sup> / <sub>16</sub> 11.5m C-C:33 <sup>9</sup> / <sub>16</sub> 10.1m	55 degrees wheelcut
12. Air suspension rear c/w levelling valve(s). Heavy duty shock absorbers.	Yes	Yes
12. Additional Information		
13. Tires - Two (2) -11R22.5 Michelin XZE 2 on front preferred Four (4) -11R 22.5 Michelin XDN2 on rear preferred disc wheels 10 stud hub pilot. Please specify your OEM equivalent if different	Yes	Yes
13. Additional Information		
14. On-Board Charging Systems Vendors should describe their preferred charging/discharging systems including EVSE noting that the expectation is that vehicles will be fitted with on board AC (19.2 kW) bidirectional charging/discharging systems that conform to the most recent SAE J1772 standards and/or other relevant standards for V2B bi-directional power flow. The vehicles should also be fitted with DC Level II charge/discharge coupler capable of a sustained maximum of 90kW of power transfer at a maximum of 200 AMPs. The coupler should conform to all current SAE standards. All charging system components shall have CSA certification or provide acceptable documentation. Charging systems shall be capable of operating from -30C to 40C with no more than 10% degradation in performance	No	Yes
14. Additional Information	Please refer to attached Type D EV Bus Spec Response.pdf	Please refer to narrative.

Type D Electric bidReport

	Dynamic Specialty Vehicles	The Lion Electric Co
15. Tow hooks front and rear heavy duty bumper.	Yes	Yes
15. Additional Information		
16. Battery solenoid switch to be connected to ignition switch for isolation of all of the switch panel circuitry.	Yes	Yes
16. Additional Information		
17. Data collection for performance and analytical comparisons must be available on a regular basis for both ASTSBC and the purchaser. Training must be provided	Yes	Yes
17. Additional Information	Yes this available. Training is provided.	Please refer to narrative.
20. Engine and body diagnostics software or licensing. Diagnostic Training must be provided to each purchaser	Yes	Yes
20. Additional Information		Lion does not have additional softwares to purchase to diagnose the vehicle. Diagnostics is included
21. Service Manual for engine and chassis	Yes	Yes
21. Additional Information		
18. Battery location and weight - please describe	Yes	Yes
18. Additional Information	Batteries are located between the frame rails and weigh a total of 3400 pounds.	Our batteries are located between the frame rail and weigh approximately 612 pounds for 42 kWh.
Options Prices:		
1 - One (1) additional spare tire mounted.	Additional	Additional
1 - If Additional please indicate the Price		779 166
2 - Air horn roof mounted.	Additional	Additional
2 - If Additional please indicate the Price		160 400
3 - Current Gatekeeper digital video system supplied and installed with 2 cameras.	Additional	Additional
3 - If Additional please indicate the Price		1838 3000
4 - Current Seon digital video system supplied and installed with 2 cameras.	Additional	Additional
4 - If Additional please indicate Price		1989 3000
5 - Driver's storage compartment overhead left side.	Additional	Included
5 - If Additional please indicate Price		133
6 - Installed Zonar current Fleet GPS Tracking and Vehicle Diagnostics System with EVIR hand held device and all accessories. Include pricing for each hand held device.	Additional	Additional
6 - If Additional please indicate Price		895 144.89
7 - Zonar current Fleet GPS Tracking and Vehicle Diagnostics System installed.	Additional	Additional
7 - If Additional please indicate Price		616 144.89
8 - Drivers Clipboard Storage accessible from drivers seat.	Additional	Included
8 - If Additional please indicate Price		16
9 - Traction control through ABS.	Additional	Included
9 - If Additional please indicate Price		469
10 - Driver controlled differential lock.	Additional	Included
10 - If Additional please indicate Price		928
11 - Limited slip rear axle.	Not Available	Included
11 - If Additional please indicate Price		
12 - Automatic greasers minimum of 12 grease points.	Additional	Included
12 - If Additional please indicate Price		3450
13 - Acoustic ceiling panels throughout.	Additional	Additional
13 - If Additional please indicate Price		651 1200

Type D Electric bidReport

	Dynamic Specialty Vehicles	The Lion Electric Co
14 - Stop Arm Camera System	Additional	Additional
14 - If Additional please indicate Price	480	350
15 - Interior mirror - 10" x 30" mirror adjustable no windshield obstruction.	Additional	Additional
15 - If Additional please indicate Price	21	50
16 - Recommended Level 2 charging system for your bus	Included	Additional
16 - If Additional please indicate Price		3000
17 - Emergency roof hatch vent with exhaust fan.	Additional	Included
17 - If Additional please indicate Price		
18 - Wheelchair lift specify OEM. Supply and install wheelchair lift with one chair position across from lift inclusive of tie down system.	Additional	Additional
18 - If Additional please indicate Price	8393	11995
19 - Track seating per wheelchair space.	Additional	Not Available
19 - If Additional please indicate Price	885	
20 - Tinted windows throughout.	Included	Included
20 - If Additional please indicate Price		
21 - Power and Range upgrade -Price for additional incremental ranges increased and decreased	Not Available	Not Available
21 - If Additional please indicate Price		
22 - Pedestrian Detection System	Additional	Additional
22 - If Additional please indicate Price	2450	3630
24 - Integrated child seats/per seat. Attach information details.	Additional	Additional
24 - If Additional please indicate Price	694	775
25 - Telescopic steering.	Included	Included
25 - If Additional please indicate Price		
26 - Hydraulic brake school bus with air seat and air suspension.	Included	Not Available
26 - If Additional please indicate Price		
27 - Hydraulic brake school bus (no air components).	Included	Not Available
27 - If Additional please indicate Price		
28 - Adjustable Foot Pedals	Additional	Not Available
28 - If Additional please indicate Price	1067	
29 - Underbody full thru luggage compartments	Additional	Not Available
29 - If Additional please indicate Price	5065	
30 - In-service training for chassis and body maintenance procedures at Purchaser's facility	Included	Included
30 - If Additional please indicate Price		
31 - Laptop & connectors with applicable programming & software or licensing including training for each style of bus supplied. ABS software	Additional	Included
31 - If Additional please indicate Price	2750	
33 - exterior entry door handle	Additional	Additional
33 - If Additional please indicate Price	35	130
34 - Extended Stop Arm	Additional	Additional
34 - If Additional please indicate Price	6435	750
35 - Air operated disc brakes	Additional	Included
35 - If Additional please indicate Price	2389	
36 - Vendor added option		Please refer to narrative.
36 - Please indicate Price		
37 - Vendor added option		
37 - Please indicate Price		
Additional information:		