

The BYD logo is a white oval containing the letters 'BYD' in a bold, sans-serif font, set against a red diamond-shaped background.

Automotive Transportation Service Superintendents' Association

Red Rose Convention Centre
Mississauga, Ontario

April 13, 2017



About Mississauga Bus Group of Companies

- Started in 2002 by Raj and Predeita Mahadeo.
- Two employees, focused on rebuilding engines.
- Now close to 100 employees and 4 companies

COMPANIES

Mississauga Bus, Coach & Truck Repair Inc.
Mississauga Fire Apparatus Incorporated
Mississauga Recon & Transmission Repair Inc.
Canadian Port & Heavy Equipment Sales Inc.



Mississauga Bus, Coach & Truck Repair Inc.

A Canadian leader in Maintenance and Repairs for the Transit, Truck, Emergency Vehicle, and Heavy Equipment Industries. Our company has a highly skilled workforce that is ready for today's technology and can perform even the most rigorous job with minimum downtime. We currently run two shifts (open 7AM-11PM) to satisfy our customer's needs.



Mississauga Fire Apparatus Incorporated

We are proud to operate one of the only Certified Compressed Natural Gas vehicle repair and maintenance shops in Ontario. Our unique facility is setup to work on specialty vehicles including Refuse/Reuse/Garbage Trucks, Ice Resurfacers to light, medium and heavy truck fleets. Our staff are some of the only 310T mechanics trained in CNG engine troubleshooting and repair.





Canadian Port & Heavy Equipment Sales Inc.

CPHES is our Heavy Equipment franchise. We are the Ontario dealer for Sany Port and Earth Moving Equipment. We are excited to be bringing our expertise in service and after sales support to this new industry. We will be announcing some new strategic partners in the next few months to help us grow in this new venture.





STRATEGIC PARTNERS



SANY

VOITH

DENSO



Grayson
THERMAL SYSTEMS



Fleetguard®

Vehicle Electrification



THE OFFICIAL SPONSOR OF
MOTHER NATURE



Started 1995
2016 Info:
\$17B Revenue
220,000 Employees
194 million sq. ft

Awards
Fortune "Change the World" 2015: BYD #15
UAE Zayed Future Energy Prize: 2016 Large Corp

R&D
20,000 engineers
4.6% of Sales
12,000 patents



Investing
60% Investors from USA
10% Berkshire Hathaway
\$2.2B by Samsung-led consortium in 2016

Battery Global Market Share
60% NiCad/NiMH
30% Li

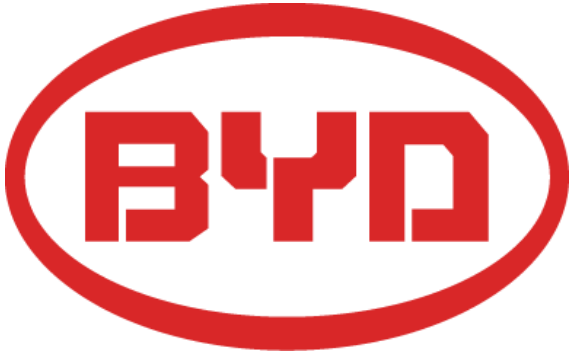


9%



NEW ENERGY
 -Solar
 -Battery Storage
 -Led

54%

AUTOMOTIVE
 -Global Leader In
 Plug-in Car Sales in
 2016: >100,000 sold
 -17,500 Electric Bus
 Orders





Monorail
 Introduced 2016

NOKIA  

37%

CONSUMER ELECTRONICS
 -1.5M CELLS/DAY
 -OEM/ODM

TOSHIBA  

Presence in North America

Regional HQ in Los Angeles

- Opened 2011
- 35,000 ft²
- 100 year old building, green renovation
- Management, sales, finance, HR



BYD Bus & Coach & BYD Energy in Lancaster, CA

- Both opened 2013
- BYD Bus & Coach: 120,000 ft²
 - Current Capacity: 200 buses
 - +40,000 ft² Jan 2017
 - +200,000 ft² end 2017
- BYD Energy: 44,000 ft²

Innovative

No. 1



No. 2



No. 3



No. 4



No. 5



No. 6



No. 7



No. 8



No. 9



No. 10



No. 11



No. 12



No. 13



No. 14



No. 15



Bloomberg List: 25 Most Innovative Companies 2010

Changing the World

| | | | | |
|---|---|--|--|---|
| No. 1 Vodafone  | No. 2 Google  | No. 3 Toyota  | No. 4 Walmart  | No. 5 Enel  |
| No. 6 GSK  | No. 7 Jain Irrigation  | No. 8 CISCO Systems  | No. 9 Novartis  | No. 10 Facebook  |
| No. 11 MasterCard  | No. 12 Grameen Bank  | No. 13 Alibaba  | No. 14 Danone  | No. 15 BYD  |
| No. 16 CEMEX  | No. 17 Discovery Ltd.  | No. 18 Novo Nordisk  | No. 19 SABMiller  | No. 20 IBM  |

Fortune Magazine Top Companies Changing the World 2015



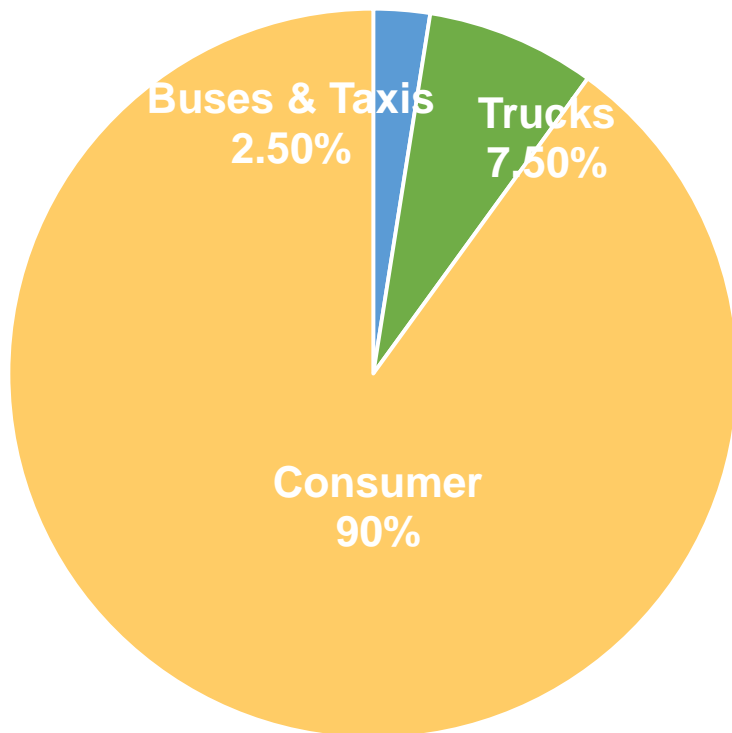
HOW ARE WE GOING TO CHANGE THE WORLD?

MOST OF THE WORLD'S POLLUTION
IS FROM ENERGY AND VEHICLES.

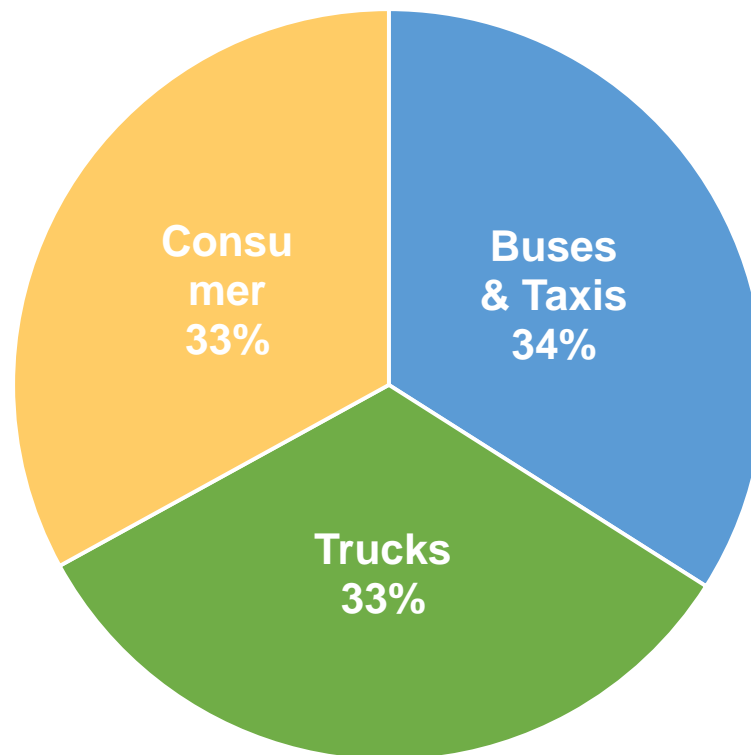
On-Road Transportation

Buses, Taxis, and Trucks represent 10% of on-road vehicles and **2/3 of CO₂e emissions!**

On-Road Vehicles



GHG Emissions



7+4 Global Vehicle Strategy

On-Road



Urban Bus



Coach Bus



Taxi



Consumer Vehicle



Logistic Truck



Sanitation Vehicle



Construction Truck

Specialty



Harbor



Airport



Warehouse



Mining

Production Schedule for North America



Medium Duty Trucks; Forklift

Refuse; Construction; Airport GSE



Transit Bus & Taxi

2013

2014

2015

2016

2017

2018



Coach Bus



Drayage; Yard Truck



Passenger
+
Specialty Port; Mining



Delivery Trucks



| | BYD 5F | BYD 6F |
|---------------|-------------------------------|-------------------------------|
| GVWR | 16,141 lbs | 23,583 lbs |
| Range | 155 miles | 124 miles |
| Charging Time | 5 hrs (40 kW)/1.7 hr (100 kW) | 5 hrs (40 kW)/1.7 hr (100 kW) |

Applications



Dry Freight



Refrigerated



Stake



Bucket/Aerial

Step Vans



BYD 5D/6D

| Item | New | Retrofit |
|---------------|--|---|
| Approach | Freightliner/Ford Chassis | Morgan Olson & Utilimaster Bodies |
| Models | 178" | 218" |
| Range | ~100 miles | ~100 miles |
| Motor | 241 hp; 1,106 ft-lbs torque; 5,000 RPM | 201 hp; 406 ft-lbs torque; 2-speed transmission |
| Charging Time | 5 hours (40 kW) | 5 hours (40 kW) |

Refuse Trucks



BYD 8R Refuse Truck: Rear, ASL, Front

| Item | Spec |
|-------------------------|--|
| Length x Width x Height | Side Loader: 33.5 ft. × 135.4 in. × 145.5 in. Front Loader: 33.6 ft × 104.8 in x 160.7 in |
| Wheelbase | 195.5 in. |
| Curb Weight | 21,680 lbs. |
| GVWR | 57,500 lbs. |
| Payload | 10 tons |
| Ground Clearance | 10" |
| Operating Range | ≥ 75 miles |
| Drive Mode | 6 × 4 |
| Max Motor Power | 402 hp (Dual on Axle Motors) |
| Max Motor Torque | 810 lb-ft (Dual on Axle Motors) |
| Battery Capacity | 188 kW |
| Charging Time | 2.6 hours @ 40 kW |

Refuse Trucks



BYD 6R: Class 6 Refuse Truck

| Item | Spec |
|------------------|-----------------------------|
| LxWxH | 311 in x 88.6 in x 129.9 in |
| Wheelbase | 167.3 in |
| GVWR | 24,578 lbs |
| Payload | 8,058 lbs |
| Turning Radius | 30 ft |
| Range | 85 mi |
| Top Speed | 56 mph |
| Motor Power | 201 hp |
| Motor Torque | 406 ft-lbs |
| Battery Capacity | 148.5 kWh |
| Charger | 40 kW; 480V 3phase AC |
| Charging Time | 5 hrs |



BYD 9C – Concrete Mixer

| Item | Spec |
|--------------------------------|---------------------------------|
| Length x Width x Height | 32.89 ft × 98.43 in × 148.82 in |
| Curb Weight | 35,825 lbs |
| GVWR | 68,343 lbs |
| Motor Max Power | 201 hp x 2 |
| Battery Capacity | 324 kWh |
| Range | 100 miles |
| Charger | 40 kW x 2 |
| Charging Time | 4 hours |
| Mixing Drum – Stirring Volume | 10 ft ³ |
| Mixing Drum – Geometric Volume | 18.7 yd ³ |

Yard Trucks



Iron Phosphate Batteries



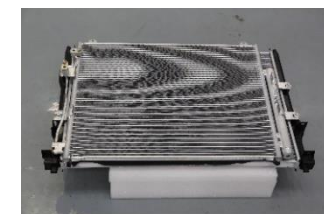
V2G Inverter



High Voltage Distribution Box



Permanent Magnet Synchronous Motor



Condenser

| Performance Metric | Capacity Sabre 5 | Ottawa T2 | BYD 8Y |
|--------------------|------------------|-----------|---------|
| GCWR (lbs) | 81,000 | 81,000 | 102,000 |
| Curb Weight (lbs) | 15,000 | 14,500 | 18,700 |
| Front Axle (lbs) | 12,000 | 12,000 | 15,000 |
| Rear Axle (lbs) | 30,000 | 23,000 | 32,000 |
| Motor (hp) | 164-225 | 200 | 241 |
| Torque (lb-ft) | 541-760 | 520 | 1,106 |



Air Compressor



3-in-1 Controller
Power Steering
Brakes
Low Voltage

15 hour runtime between charges
Recharge in 1 hour (200 kW)

Port Vehicles



BYD 8TT – Drayage Truck

| Item | Spec |
|-------------------------|-------------------------------|
| Length x Width X Height | 286.8 ft x 98.4 in x 121.5 in |
| Curb Weight | 23,149 lbs |
| GCWR | 105,000 lbs |
| Peak Power | 241 hp x 2 |
| Peak Torque | 1,106 ft-lbs x2 |
| Range | 100 miles |
| Battery Capacity | 207 kWh |
| Charging Time | 2.8 hours @ 80 kW |



| Item | Spec |
|--------------------------------|----------------------------|
| Length x Width X Height | 1,150 in x 542 in x 772 in |
| Curb Weight | 8,444 lbs |
| Rated Load | 55,115 lbs |
| Wheelbase | 591 in |
| Speed (without load/with load) | 6 mph/15.5 mph |
| Motor | 28 kW |
| Torque | 92 ft-lbs |
| Battery Capacity | 36.8 kWh |
| Charging Time | 2.3 hours @ 16kW |



Material-Handling Services

ECB 16/18



ECB 25/27



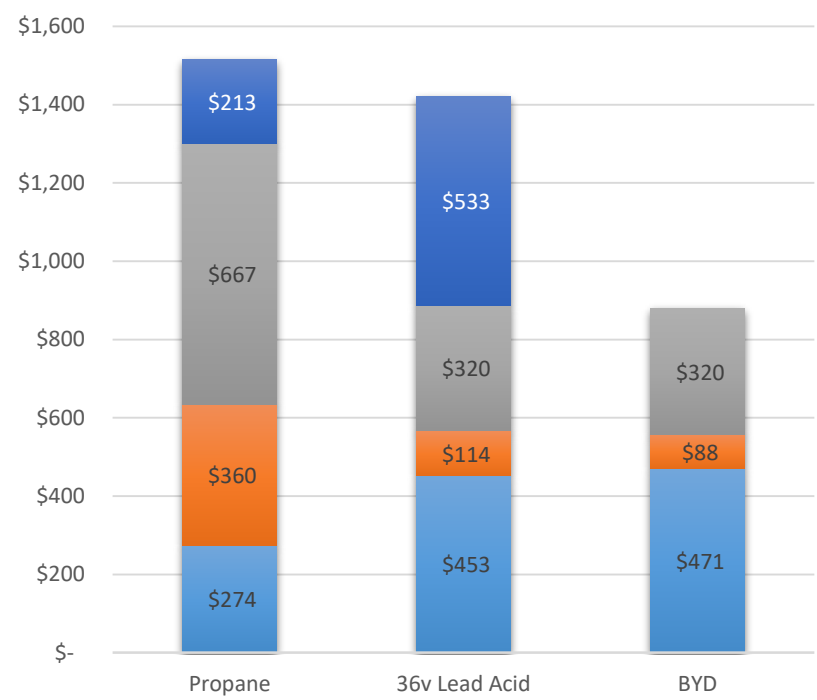
ECB 30/35



| | ECB 16/18 | ECB 25/27 | ECB 30/35 |
|----------------|--------------------|--------------------|--------------------|
| Load | 3,500-4,000 lbs | 5,500-6,000 lbs | 7,300-7,700 lbs |
| Length x Width | 115.55in x 41.34in | 132.87in x 47.05in | 142.91in x 53.54in |
| Battery | 18 KWh | 36 kWh | 42 kWh |

1. Lower Total Cost of Ownership: never need to replace batteries; fast charge < 1 hr, so don't need redundant trucks; 98% efficient compared to 70% for lead acid due to heat loss
2. Performance: responsive, inclines up to 20% with no rollback, operate in extreme temperatures -40° up to 140° F
3. Safe: no combustion, gassing, venting, toxic metals

Monthly Lease Rates



■ Lease Rate ■ Propulsion ■ Truck Contract O&M ■ Battery Maint.



Mining Trucks

| Item | Spec |
|-------------------------|--------------------------------|
| Length x Width x Height | 28.67ft x 129.92in x 156.89 in |
| GVWR | 141,120 lbs |
| Rated Load | 83,790 lbs |
| Range | 62 miles |
| Battery Capacity | 394 kWh |
| Charging Time | 2 hours @ 200 kW |





THANK YOU!