



Welcome to the refuse revolution.

Mack® LR Electric

Electromobility and Refuse

GREAT FIT FOR MANY REFUSE APPLICATIONS

Why Refuse?:

- Closed loop operation on predetermined routes
- Return home every night
- Start/Stop nature of refuse pick-up allows for plenty of regenerative braking opportunities to recapture energy

Why Electric?:

- Zero vehicle emissions
- Reduced noise
- Sustainability benefits such as reduced maintenance/consumables (oil, lubricants, brake components)

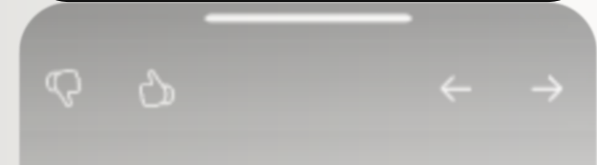
For More than a Century



MACK

**WE ARE DOING
THIS FOR OUR
PLANET AND
ITS SPECIES**

“Moving and building a better world”



MACK LRE OVERVIEW



Product / Commercializing LR Electric

**It's not just about the truck.
It's the whole ecosystem.**



Mack Integrated Electric Powertrain

SPEC'S

Motors:

- Two AC Permanent Magnet Synchronous Motors;
536 peak horsepower – 448HP continuous
- 4,051 lb.-ft. of torque
- Traction voltage: 600 volts

Transmission:

- Two-speed Mack Powershift

Axles:

- Mack FXL20 20,000-lb. front axle
- Mack S462R 46,000-lb. rear axles



MAEK
ELECTRIC

Mack Integrated Electric Powertrain

SPEC'S

- CCS1 DC charging interface
- SAE J1772 compliant
- Located on LH side below behind cab
- Up to 150kW DC charging power
- Regenerative braking system



Type 1 CCS plug and socket: Type 1 (or J1772) AC plug + CCS

Mack Integrated Electric Powertrain

SPEC'S

Accessory Power:

- All accessories are electrically driven, including body hydraulics
- 12-, 24- and 600-volt circuits

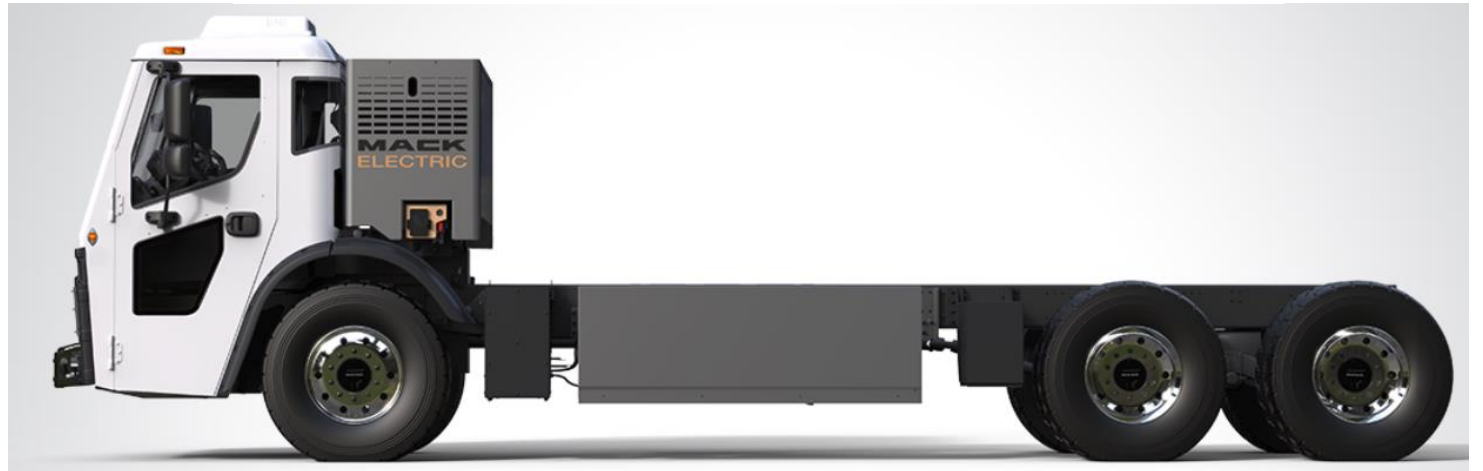
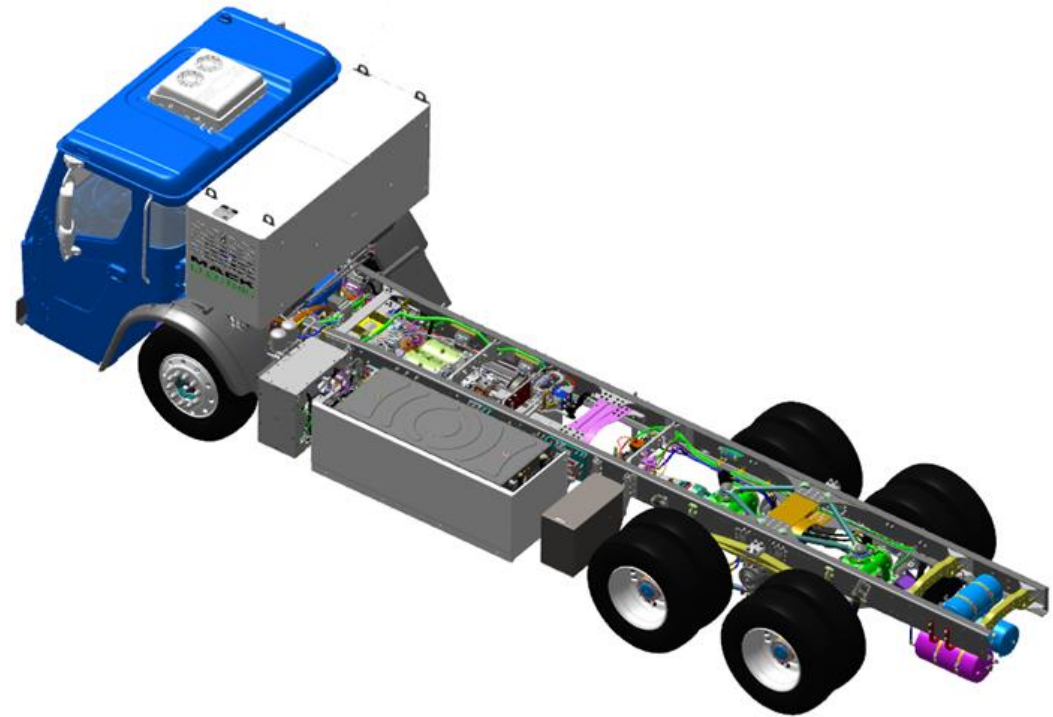
Body:

- Rear Loader
- Automated Side Loader

MAEK
ELECTRIC



Chassis Layout



Mack LR Electric Next Gen Features

- 100% Electric
- 42% more energy
- Standard 376kWh battery capacity
- 25,000 payload ability @ 66,000 GVWR
- Up to 100 on the job miles
- Charging: 150kW (~120min for a full charge)



Welcome to
the refuse
revolution.

Mack® LR Electric



Download the Mack Route Recorder app.

The Mack Route Recorder App is designed to help you see how ready your refuse fleet is to make the switch to emobility. Find it in the app store.

Get the app for iOS and Android:



RANGE CALCULATOR FOR ELECTRIC VEHICLES MACK TRUCKS



RESULTS

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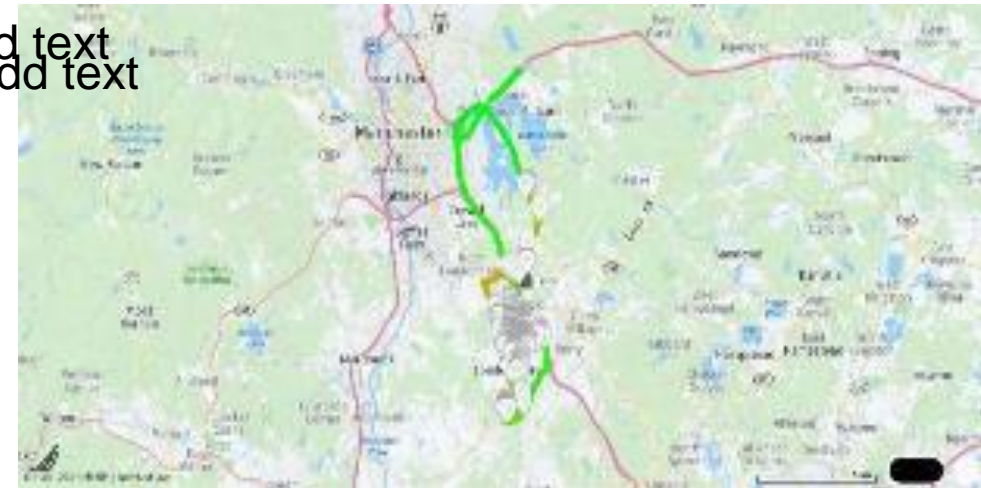
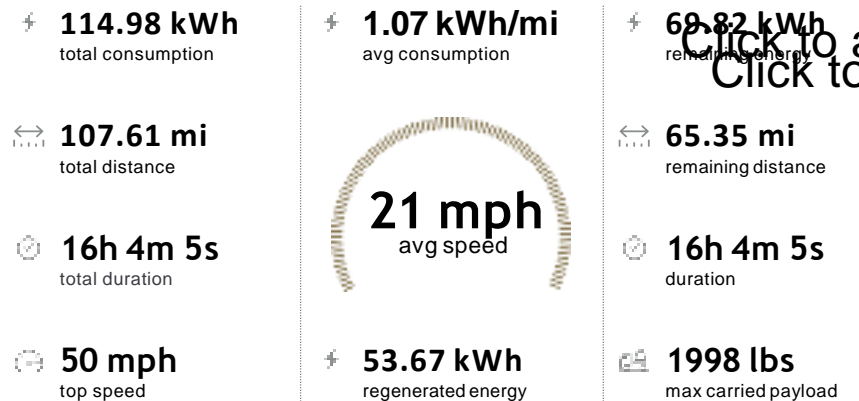
Customer name	Segment type Waste & Recycling	Vehicle type LR Electric	Base specification Automated Side Loader	Axle configuration 6x4	Battery generation 2	Battery number 4
City, State and Country United States		Route name Sheet1		Route length 107.61 mi	Number of waypoints 1010	Loop count 0
Auxiliaries			Available payload 29200 lbs	Departure date 09/22/2021, 11:13 am	Driver rest time length 0 min	Max allowed drive time 0.0 h

STATISTICS

Statistics results summarizing route parameters.

ROUTE SIMULATION

Map view presenting route simulation.



Results shown are an estimation only based on information you provide. We cannot guarantee the accuracy of the information input, nor the results of the output. Actual results may be higher or lower depending on a variety of factors. These factors include, but are not limited to, drivers behaviour, vehicle speed, vehicle maintenance, topography, weather and road condition and other factors related to the actual use of your vehicle. We make no representations, warranties or guarantees as to the accuracy of any projections or calculations in this application. We assume no liability for any damages or costs of any type arising out of or in any way connected with your use of or your reliance upon this application. This application collects, processes and saves information for each session created. The application user identification, which may include user name, user contact information, and a passcode or other access attributes, customer name and contact information, and session name provided are processed and saved to allow customer and session information to be reopened. The information stored is not used in any way outside of the application; however, we may run analytics on various attributes of the usage of the application in an effort to improve the user and customer experiences with the application. Application access attributes may also be used to monitor our compliance with third party application licensing terms. The user or customer may at any point ask to review the information saved in the application, or request to alter or delete the information at any time. Alteration or deletion of the information from the application may impact the accessibility or performance of the application relative to the user or customer at issue. The user or customer may refer to the Privacy Policy at our official website MackTrucks.com for additional information.



CHARGING INFRASTRUCTURE

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Turnkey Solution Partners

- Ideal for partners that are new to BEV space or have limited resources
- Single point of contact for all critical activities
- Reduced design and lead times
- Sourcing activities have already been completed



Shell
Recharge
Solutions



GILBARCO
VEEDER-ROOT

-chargepoint+

DC Fast Charging Times (Approximate)

*Max charge rate for LRe is 150kW

Hardware Output	Single Port (hours for full 376kW charge*)	Dual Port (hours for full 376kW charge*)
50kW	5-6	10
75kW	4	6
125kW	3	5
150kW- 175kW	2-3	5

MACK ULTRA SERVICE AGREEMENT



MACK.

A man with glasses and a beard, wearing a bright green high-visibility safety vest over a blue shirt, is driving a truck. He is looking out the window to the right. The interior of the truck is visible, including the steering wheel, dashboard, and a rearview mirror. The background shows a blurred outdoor scene with trees and a building.

**MACK® ULTRA SERVICE AGREEMENT
FOR LR ELECTRIC**

Peace of mind. Backed by Mack.

When you purchase the Mack LR Electric, you're connected to a coast-to-coast network of service, support and the most comprehensive service agreement we offer.

Mack Ultra Service Agreement



Comprehensive Protection

Get complete coverage for batteries, electric control system, powertrain, chassis, suspension, cab, steering system, towing and more.

Serious Support

With Mack OneCall® and ASIST, your teams receive unmatched 24/7 roadside support and assistance to ensure your trucks and your business are always running strong.

Unmatched Connectivity

Keep your teams connected with Mack's advanced uptime, telematics and connectivity service, GuardDog® Connect, included with every Mack LR Electric.

Worry-Free Maintenance

Rest easy knowing that scheduled and preventive maintenance is covered through the term of the agreement and is performed by Mack Certified Electric Vehicle Dealers.

Battery Performance Guarantee

Monitored by Mack through GuardDog Connect, we guarantee every battery maintains at least 80% of the original charge capacity for the duration of the Ultra Service Agreement.

LR Electric is the right choice

Values:

- ZERO EMISSIONS
- Lower running costs
- Greater uptime
- Reduced noise pollution
- Improved driving experience



Unique Selling Points

- We are the industry refuse leader
- A refuse vehicle first, now electrified
- Fully integrated Mack powertrain
- Extensive dealer network
- Developed and manufactured in USA
- 5YR Ultra Service Agreement with ESS performance guarantee (80%SoH)



INCENTIVE PROGRAMS



MACK®