



**MUNRO**

2022

**GMC**

HUMMER EV PICKUP  
EDITION 1



**BATTERY PACK & EDM COST &  
BENCHMARKING ASSESSMENT**

## GMC HUMMER EV PICKUP OVERVIEW

- GMC offers four trim levels, the Edition 1 (EV1), EV2, EV2X, and the EV3X. Edition 1 and EV3X are currently available. The EV2X is launching in the spring of 2023 and the EV2 is planned to launch the spring of 2024.
- Three-motor Ultium Drive system with (GM-estimated) best-in-class 1,000 horsepower and combined axle torque of (GM-estimated) 11,500 lb-ft
- Segment-exclusive available driving modes include Watts to Freedom, CrabWalk, and available Extract Mode
- 800-volt 350-kilowatt DC fast charging capability
- First GMC EV with brand-first Regen on Demand, available Super Cruise hands-free driver assistance feature for compatible roads
- Edition 1 incorporates three electric drive motors within its Ultium Drive for a combined GM-estimated 1,000 horsepower. In conjunction with the front and rear drive unit gear ratios, GM estimates an available 11,500 lb-ft of torque at the wheels.
- The single-motor front drive unit has a 13.3:1 fixed gear ratio and offers an electronic lockable differential, capable of delivering up to 100 percent of the motor torque to one wheel, in case traction is lost on the opposite wheel. All four wheels can be fully synchronized for true e4WD propulsion.
- Two rear motors contained in one Ultium Drive unit independently power the rear wheels through a fixed gear ratio of 10.5:1, with the capability of varying torque output to each wheel to optimize traction in off-road driving and highway-driving conditions. Motor output can also be synchronized to simulate a locking differential.

## GMC HUMMER EV EDITION 1 DESCRIPTION

The HUMMER Edition 1 is GMC’s EV ‘supertruck’ developed with zero emissions, along with the all-new GMC HUMMER EV SUV2 built at Factory ZERO in Detroit-Hamtramck.

- Starting at \$112,595
- 3 motors
- 0-60 in approximately 3 seconds
- Fast charging of up to 100 miles of range in 10 minutes
- Infinity Roof with Modular Sky Panels
- Six function tailgate
- Backlit grille
- Adaptive air suspension
- Independent four-wheel rotation
- 13.4-inch infotainment display
- Power-operated tonneau cover

General Specifications	2022 GMC Hummer
	Edition 1 Pickup
Seating Capacity	5
Driving Assistance	Super Cruise
Height	79.1 inches
Length	216.8 inches
Wheelbase	135.6 inches
Width (w/o mirrors)	86.7 inches
Track Width Front / Rear	73.3"
Horsepower / Torque	1,000 hp/11,500 lb-ft of torque
Driving Range (GM Estimated Final Combined)	329 miles
Towing	Up to 7,500 lbs (GM Estimated)
Payload	Up to 1,300 lbs (GM Estimated)

## **GMC HUMMER PICKUP REPORTS**

The Battery Pack, Front Gearbox and Battery Cell reports are a consolidation of Munro's technical findings related to cost, features, performance, and technology implementation, including Executive Summaries, Eye-Catching Features and Directional Cost Estimates.

**The following three GMC Hummer reports will be available for purchase:**

### **1. Battery Pack and HV Systems**

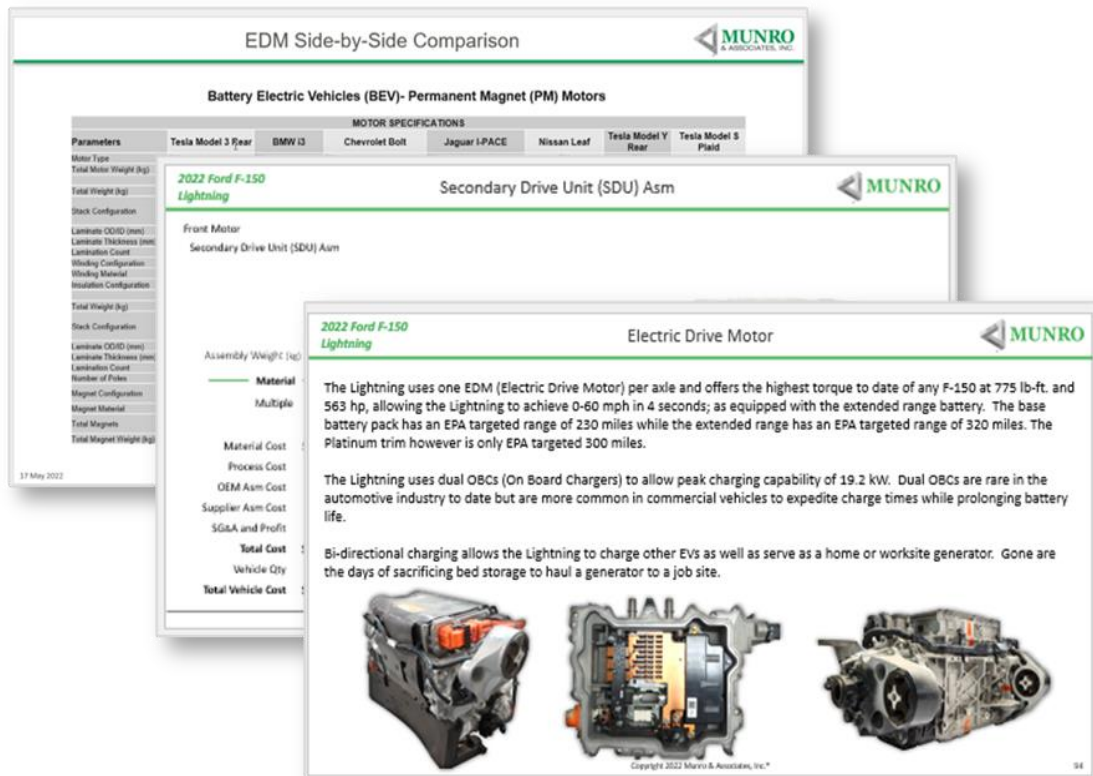
Analysis includes:

- Intra-battery pack components only. Thermal management, HV cables, shields, LV/HV Control modules outside the pack are not included.
- High-level summaries related to battery specifications, construction, thermal management, HV electrical topology and related qualitative information.
- Interesting observations, which are called "Eye-Catching Features." These observations represent advantages and/or disadvantages in cost, weight, feature content, or performance as related to design, material choices, assembly or manufacturing process selection.
- CAD-Sketch highlighting major dimensional monuments such as overall battery pack Z-height, layering of the battery pack components and spatially correct illustrations of battery pack internals.
- Directional cost estimates, which provide the customer with approximate costs, versus detailed costs which are more expensive and time consuming to generate. This level of accuracy provides OEMs and Suppliers the ability to make sound comparisons and directional decisions.

## 2. Front Motor, Inverter and Gearbox Report

Analysis includes:

- The Front Motor, Inverter, Front Gear Box, Housing, and several technical details of the motor design
- High-level summaries related to motor, gearbox and inverter specifications, key dimensions, construction, and related qualitative information
- Technical Information relating to architecture type, magnets, laminates and mount configurations
- Eye-Catching Features
- Directional cost estimates



**EDM Side-by-Side Comparison**

Parameters	Tesla Model 3 Rear	BMW i3	Chevrolet Bolt	Jaguar I-PACE	Nissan Leaf	Tesla Model Y Rear	Tesla Model S Plaid
Motor Type							
Total Motor Weight (kg)							
Total Weight (kg)							
Stack Configuration							
Laminates Count (mm)							
Laminates Thickness (mm)							
Lamination Count							
Winding Configuration							
Winding Material							
Insulation Configuration							
Total Weight (kg)							
Stack Configuration							
Laminates Count (mm)							
Laminates Thickness (mm)							
Lamination Count							
Number of Poles							
Magnet Configuration							
Magnet Material							
Total Magnets							
Total Magnet Weight (kg)							

**2022 Ford F-150 Lightning Secondary Drive Unit (SDU) Asm**

Front Motor  
Secondary Drive Unit (SDU) Asm

Assembly Weight (kg)  
Material  
Multiple


Material Cost  
Process Cost  
OEM Asm Cost  
Supplier Asm Cost  
SG&A and Profit  
Total Cost  
Vehicle Qty  
Total Vehicle Cost

**2022 Ford F-150 Lightning Electric Drive Motor**

The Lightning uses one EDM (Electric Drive Motor) per axle and offers the highest torque to date of any F-150 at 775 lb-ft. and 563 hp, allowing the Lightning to achieve 0-60 mph in 4 seconds; as equipped with the extended range battery. The base battery pack has an EPA targeted range of 230 miles while the extended range has an EPA targeted range of 320 miles. The Platinum trim however is only EPA targeted 300 miles.

The Lightning uses dual OBCs (On Board Chargers) to allow peak charging capability of 19.2 kW. Dual OBCs are rare in the automotive industry to date but are more common in commercial vehicles to expedite charge times while prolonging battery life.

Bi-directional charging allows the Lightning to charge other EVs as well as serve as a home or worksite generator. Gone are the days of sacrificing bed storage to haul a generator to a job site.



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\*Example slide images from Ford F-150 Lightning Reports – also available from Munro

## REPORT DELIVERY

- All reports and accompanying deliverables will be made available for easy access through a secure File Transfer Protocol (FTP) site.
- A PDF format ensures that subscribers can easily locate a wide range of materials in addition to the reports.
- Munro's large reports each feature a linked table of contents, allowing users to easily navigate the report contents and quickly locate specific data.

## FREQUENTLY ASKED QUESTIONS

- **Is GMC involved in the study?**

No. Neither GMC's proprietary costs nor any of GMC's suppliers' quoted costs will be used in this study.

- **Is there any GMC proprietary IP in this report?**

No. All data will be developed through Munro's proven methodologies, analyzing a production-version GMC Hummer

- **Are the components to be costed using country-specific costing centers?**

Yes. Munro uses country-specific labor rates, factory floor costs, utilities, taxes, and SG&A for OEM and Tier Suppliers, wherever manufacturing location is identifiable.

- **Is this a Costing or Pricing report?**

This is a Costing Report. Pricing has too many variables.

## LEGAL DISCLAIMERS & SALES CONDITION

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Please contact [reports@leandesign.com](mailto:reports@leandesign.com) and we will provide sample information in digital PDF format. NOTE: Critical data will be blurred in the sample.

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- **If questions arise, is a Munro expert able to visit and explain the report's details?**

Munro will visit customers, if the customer pays for the travel and a daily fee.

- **If there are limited specific questions on the content of the report, is it possible for a Munro representative to support a phone call or e-mail communication?**

Yes, please contact [reports@leandesign.com](mailto:reports@leandesign.com) and we will respond with our answers.