



THE ALL-NEW  
RAM PROMASTER™

RUN THE TOWN

EXPLORE RAM PROMASTER™

Home / News / Electric Cars / Will There Be Enough Batteries In The World For Electric Cars?

# Will There Be Enough Batteries In The World For Electric Cars?

By Antony Ingram 81 Comments | 6,041 views | Jun 5, 2014

Follow Antony

Reddit This!

Share on Facebook

Share on Twitter



Johnson Controls 48-volt lithium-ion micro-hybrid battery

As demand for electric cars grows, supply of [batteries](#) must grow to meet it.

That much is obvious. But just how much is battery demand expected to grow by over the coming years?

According to an [Electric Vehicle Batteries](#) report by [Navigant Research](#), existing capacity for lithium-ion battery production will grow tenfold by 2020.

## Fine, so far

Last year, worldwide capacity for automotive lithium-ion batteries stood at 4,400 megawatt-hours.

Supply has been comfortable--a [Nissan and NEC joint venture](#) in Japan, AESC, has already supplied cells for 115,000 electric Leafs running around on the world's roads. And last year, nearly 100,000 plug-in cars [hit U.S. roads alone](#). That's a lot of batteries.

But growth in demand for full battery-electric vehicles--which use larger battery packs than plug-in hybrids or regular hybrid vehicles, and will therefore lead demand--will require significant growth in production.

By 2020, production capacity could climb to over 49,000 megawatt-hours--ten times that of 2013's figure.

## Tesla's contribution



## RELATED ARTICLES



BMW, Samsung To Share Electric-Car Battery Tech With Other Makers



Battery Maker Boston Power Gets \$250 Million Investment From China



Why Lithium-Ion Batteries Degrade With Repeated Charging



Toyota Researches Solid-State Batteries As Mid-Term Option To Lithium-Air



Are Vanadium Flow Batteries The Solution To 'Too Much' Solar Power?

## FOLLOW US

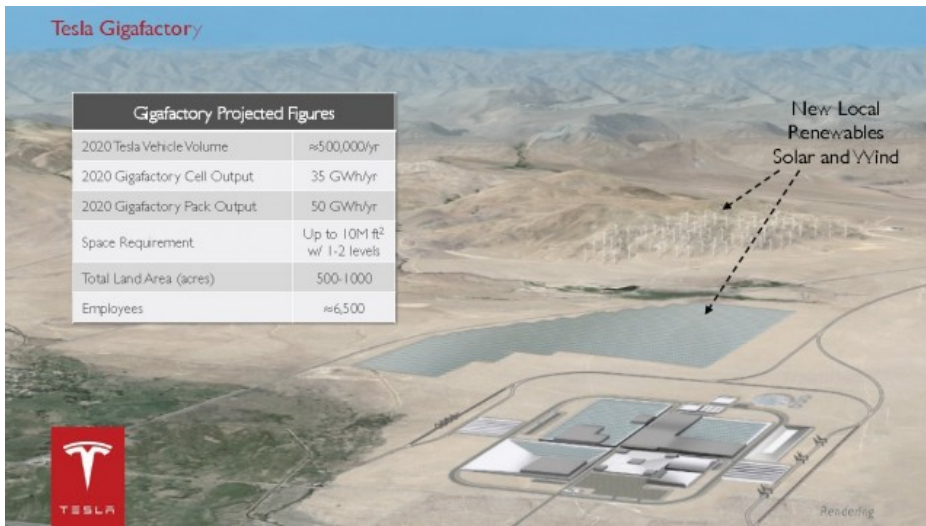
Like 193k On Facebook

Follow @GreenCarReports

Green Car Reports on G+

## Most Popular This Week





Slide showing Tesla Motors gigafactory statistics, from Feb 2014 presentation

Tesla Motors, producer of the all-electric Model S sedan, could alone contribute more than half the world's lithium-ion battery output when its battery "gigafactory" comes on-stream.

Once up to speed, the factory is projected to produce **35 gigawatt-hours of cells per year by 2020**, enough to supply half a million vehicles. Those are just projected figures, but that alone is over three-fifths the capacity cited by Navigant in its report.

Tesla's gigafactory could be one of two or three sites in the U.S, according to Elon Musk--but further sites do hinge on Tesla receiving approval to build at its selected locations.

Work on the first battery gigafactory, originally planned for June, has now been pushed back **towards the end of this year**.

**Lithium still dominant**

For the time being, lithium-ion chemistry appears to be dominant in the EV market.

Several hybrids, such as the strong-selling Toyota Prius, started off with nickel-metal hydride chemistry--and still use the long-lasting packs to this day.

But in terms of performance and energy density, lithium-ion is setting the pace.

"Li-ion technology continues to improve," says David Alexander, senior research analyst with Navigant Research, "as increased energy densities translate into smaller and lighter battery packs with more power."

Current forecasts predict the global market for Li-ion batteries in passenger vehicles will grow from \$3.2 billion in 2013 to \$24.1 billion in 2023.

Provided extra factories come on-stream--particularly Tesla's vast battery gigafactory, there's no reason to expect that demand for lithium-ion batteries should outstrip supply. And electric vehicle sales should continue to grow as a result.

Follow GreenCarReports on [Facebook](#), [Twitter](#) and [Google+](#)

Reddit This!
Share on Facebook
Share on Twitter

TAGS: [BATTERIES](#) [LITHIUM-ION](#) [RESEARCH](#)

POSTED IN: [ELECTRIC CARS](#)

**Latest Video**

- Hyundai vs. Tesla: LEXUS Claims U.S. Funds Superchargers... Like 4.6k 141 Comments
- White House Responds To Tesla Direct-Sales Petition: Sorry, Talk... Like 5.8k 53 Comments
- 2016 Chevy Volt To Get More Efficient, Less Expensive Inverter Like 2.2k 53 Comments
- Tesla Recruits U.S. Military Veterans To Build Electric Cars In... Like 1.8k 19 Comments
- 2016 Toyota Prius: AWD Still Considered For Next-Gen Hybrid Like 251 23 Comments

[More »](#)

News In Your Inbox

## GreenCarReports

Enter email  [SIGN UP](#)

## Find Green Cars

Select Make

Select Model  [GO!](#)

Preproduction model shown. Properly secure all cargo.

The All-New Ram ProMaster™

[EXPLORE RAM PROMASTER™ >](#)

## Topics

G A S M I L   H Y B R I D S

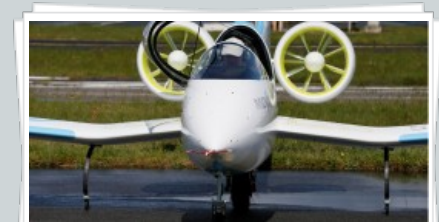
E L E C T R I C   D I E S E L



[Watch more videos from our YouTube channel »](#)



## Photo Galleries



Airbus Electric Aircraft Makes Public Flight In UK, We Still Want One

« 1 of 5 »»



## Top 7 Hybrid Cars

[comparestores.net/Electric-Cars](http://comparestores.net/Electric-Cars)

2014 Bestselling Hybrid Cars Compare Latest Deals & Save Big!



### CONTRIBUTE

- Send us a tip
- Comment
- Contact the editor

### FOLLOW US

Like 193k

Follow @GreenCarReports

Get daily e-mail updates

Enter email

GO

## People Who Read This Article Also Read



Why Tesla's Elon Musk Must Sell 6 Million Electric Cars To...



Elio 84-MPG Three-Wheel Prototype: Driven In Parking Lot...



Why Lithium-Ion Batteries Degrade With Repeated Charging



Where Do Hybrids, Diesels Sell Best? State-By-State Data...

Take the quiz to find out!

GO

FamilySizeMatters.com

## More from High Gear Media

### MOTORAUTHORITY



Aston Martin Abandons SUV Plans, Focuses On Coachbuilt Cars For Expansion



Koenigsegg One:1 Up Close And Personal Action: Video



2015 Ford Mustang Specs, 2015 Lexus NX Driven, C63 AMG S Model: Car News Headlines

### The Car Connection



2015 Honda Fit, SUVs Outsell Sedans, 2015 Ford Mustang Specs: What's New @ The Car Connection



2008 Chevy Malibu Among GM Models Recalled For Power Steering Problems



2015 Dodge Challenger, 2016 Mazda 2, 2016 Smart ForTwo: What's New @ The Car Connection



[News](#)

[Reviews](#)

[Electric](#)

[Gas Mileage](#)

[Car Types](#)

[Buying Guides](#)

[Company](#)

[About Us](#)

[Contact Us](#)

[Press](#)

[Legal](#)

[Privacy Policy](#)

[Reprints](#)

[Follow Us](#)



© 2014 Green Car Reports. All Rights Reserved. Green Car Reports is published by High Gear Media. Send us feedback. Stock photography by Homestar, LLC.