

The Gasoline-Powered Automobile Is Obsolete

*Electric Drivetrains Are the Key to
Reducing Climate Change Caused by
Our Cars & Trucks*

Wall Street Analyst Ron Baron:

While many car companies doubt electric cars will ultimately represent a large portion of new car sales, BMW is not one of those companies.

Two of our research analysts recently visited BMW's headquarters in Munich, as well as its electric vehicle and carbon fiber assembly plants in Leipzig, Germany, and its battery pack assembly plant and research facility in Dingolfing, Germany.

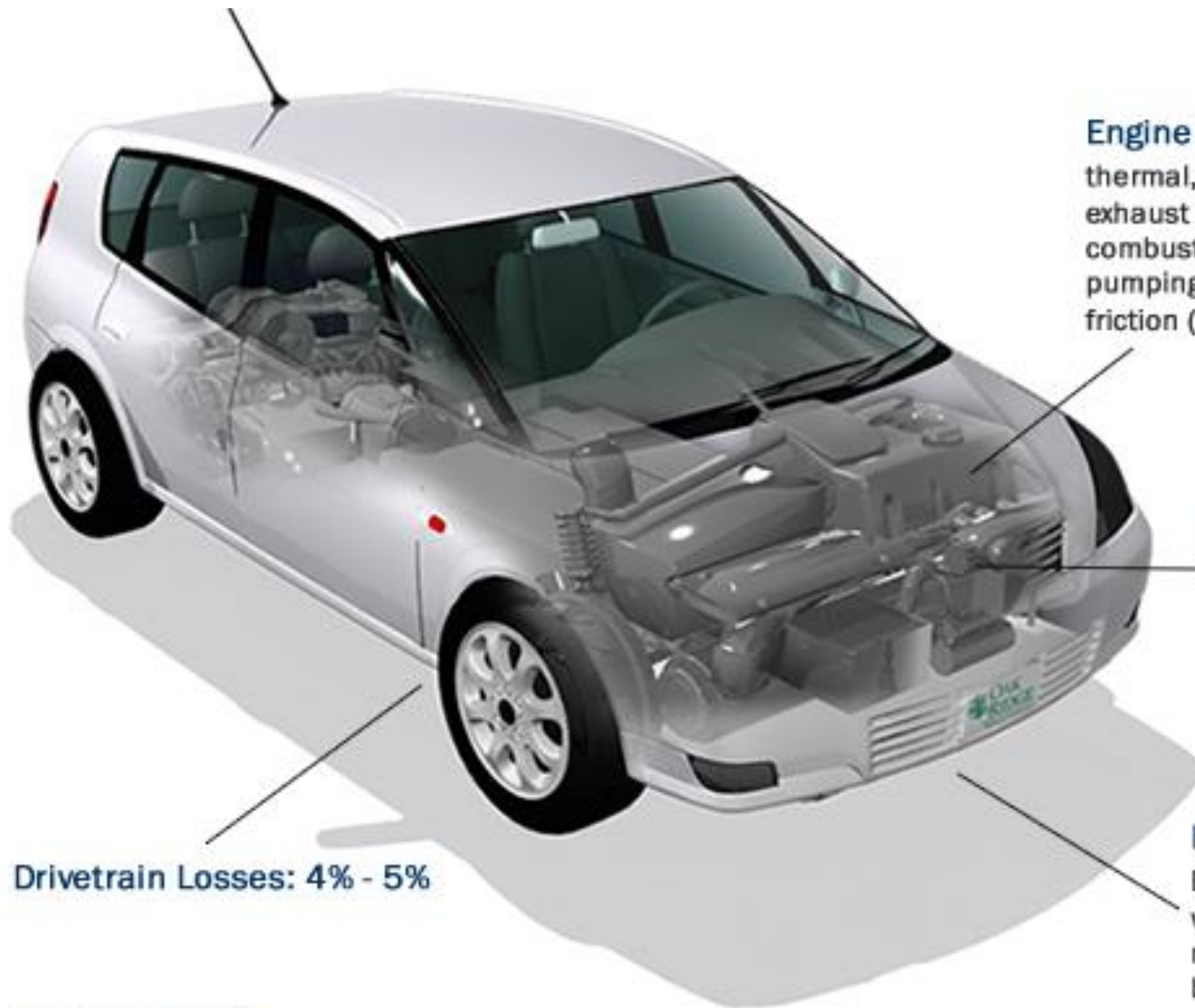
The BMW financial team believes a revolution in drive train is underway. We believe that BMW will likely phase out internal combustion engines over the next 10 years!

--Baron Funds' Sept. 30, 2014 Newsletter

“Our cars and trucks are a major cause of global warming. Collectively, they account for nearly one-fifth of *all* U.S. emissions, emitting around 24 pounds of carbon dioxide and other global-warming gases for every gallon of gas. About 5 pounds comes from the extraction, production, and delivery of the fuel, while the great bulk of heat-trapping emissions—more than 19 pounds per gallon—comes right out of a car’s tailpipe.”

--Union of Concerned Scientists

***Yet, Less than 20% of
the Power in Gasoline
Goes to Propel the
Vehicle.***



Engine Losses: 71% - 75%

thermal, such as radiator,
exhaust heat, etc. (60% - 64%)
combustion (3%)
pumping (5%)
friction (3%)

Parasitic Losses: 5% - 7%

(e.g., water pump,
alternator, etc.)

Drivetrain Losses: 4% - 5%

Idle Losses: 6%

In this figure, they are accounted for as part of the engine and parasitic losses.

Power to Wheels: 14% - 20%

Dissipated as
wind resistance: (3% - 5%)
rolling resistance (3% - 5%)
braking (7% - 10%)



Slowing Down or Going Downhill, It Gets Worse...

You Burn Gasoline *and* You Convert the Potential Energy of Your Vehicle's Movement into Heat Through Your Brakes.

Only Electric Vehicles Allow You to Recapture the Energy Used to Gain Speed or Climb Hills.

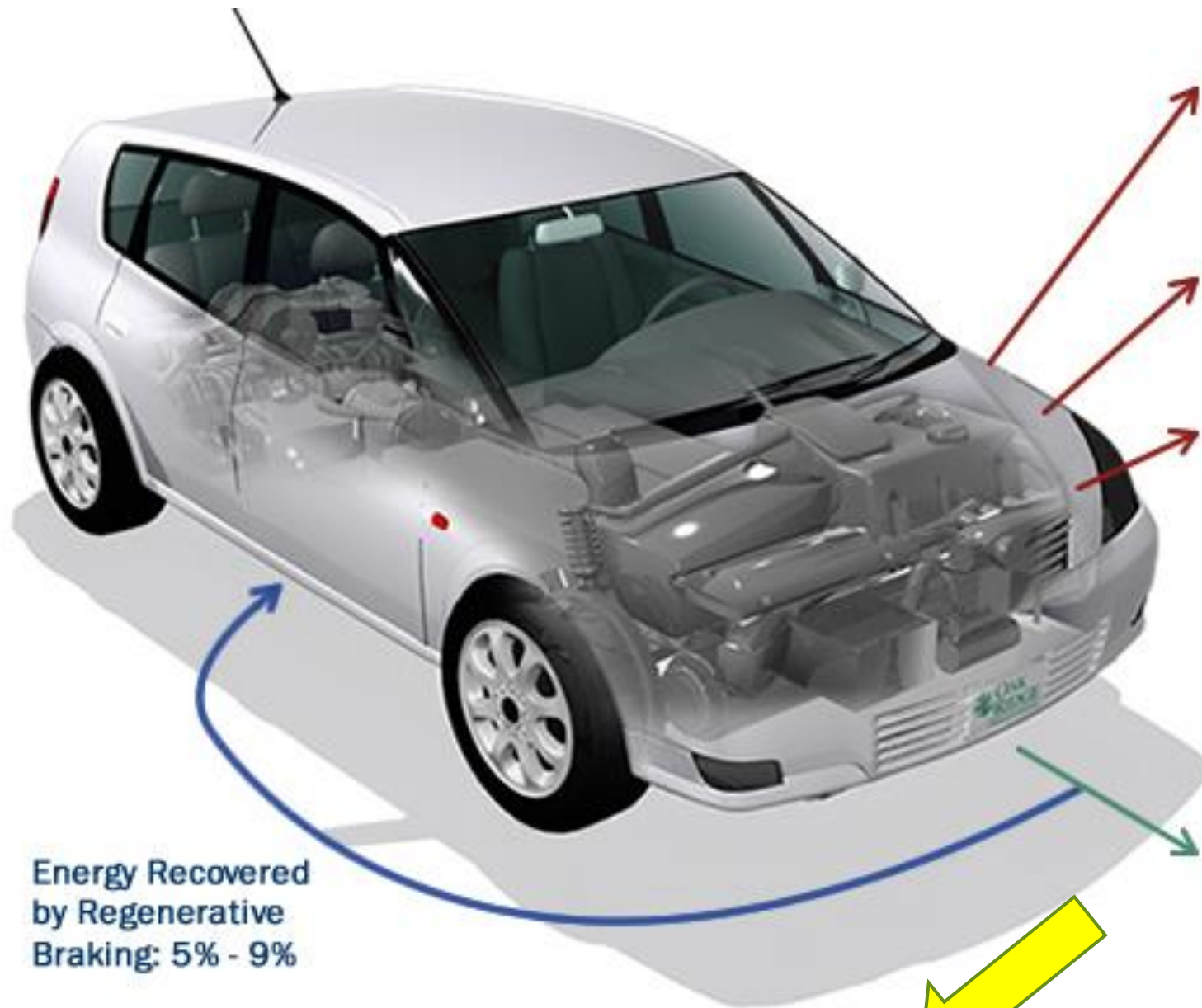
Case Study: ***Regenerative Braking in My Tesla***

8.9 Miles from Genesee Exit to I-70 to my office in Golden.

My Tesla generated 1.5 kWh of electricity, while the cars around me burned ~1 quart of gas. Good for another 5 miles travel.

***Hybrid Electric Cars Are
Somewhat More Efficient...***

But Are Not the Answer.



Engine Losses: 65% - 69%
thermal (e.g., radiator, exhaust heat, etc.), combustion, pumping losses, and friction

Parasitic Losses: 4% - 6%
(e.g., water pump, alternator, etc.)

Drivetrain Losses: 3% - 5%

**Energy Recovered
by Regenerative
Braking: 5% - 9%**

Power to Wheels: 27% - 38%
Dissipated as
wind resistance: (11% - 16%)
rolling resistance (7% - 11%)
braking (9% - 13%)

Idle Losses: Near 0

Electric Vehicles are...

Energy efficient. Electric vehicles convert about 59–62% of the electrical energy from the grid to power at the wheels—conventional gasoline vehicles only convert about 17–21% of the energy stored in gasoline to power at the wheels.

Environmentally friendly.

EVs emit no tailpipe pollutants, although the power plant producing the electricity may emit them.

Electricity from nuclear-, hydro-, solar-, or wind-powered plants causes no air pollutants.

Performance benefits.

Electric motors provide quiet, smooth operation and stronger acceleration and require less maintenance than ICEs.

The background of the slide features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect.

Reduce energy dependence.

Electricity is a domestic energy source.

And...

Electricity is the only energy that you
and I can create at home!

Today's Sustainability Model Is Here:

A Net Zero Energy home, possible through Solar PV and the removal of natural gas appliances, can also power your personal transportation!

***“Okay, But Gasoline-
Powered Cars Will Only Be
Obsolete When Electric
Vehicles Are Practical”***

But Wait...

Electric Vehicles Are Practical NOW:

**As a Second Car for Commuting and Local Use:
Examples: Nissan Leaf, Smart EV, Fiat 500e**

**As a Primary Car Because of Increasing Battery
Range or Range-Extending Gas Engine:
Examples: Tesla Model S, Chevy Volt, BMW i3**

Electric Cars Are Affordable to Buy Because of Federal/State Tax Credits:

Chevy Volt -- \$34,170 minus \$13,500 = \$20,760

Nissan Leaf -- \$28,980 minus \$13,500 = \$15,480

Fiat 500e -- \$31,800 minus \$13,500 = \$18,300

Ford C-MAX -- \$31,635 minus \$13,500 = \$18,135

Tesla Model S 85 -- \$79,900 minus \$13,500 = \$66,400

Note:

These Tax Credits Are for Early Adopters - Be One!

EV's Cost Less to Operate:

Cost per Mile

Electric Cars -- 4 cents

Gasoline Cars -- 15 to 30 cents

Don't Forget Maintenance Costs!

Electric Cars -- negligible

Gasoline Cars -- 10 cents/mile (est.)

Don't Invest in Auto Repair Shops...

The 10 Most Common Auto Repairs (Gas vs. Electric)

Brake Jobs - EV brakes last much longer

Oil Changes -- In my Chevy Volt, every 60,000 miles

Coolant System -- Yes, for battery management & climate control

Tires -- Actually, this is the EV's highest per mile cost

Ignition System -- EV's always start

Electrical System -- Less complicated in an EV

Fuel System - In hybrids

Transmission -- No transmission in my Tesla

Exhaust System -- In hybrids

Air Conditioning -- Not fan-belt driven in an EV

Lower Maintenance Cost:

Tesla cars need less service than ICE cars. A standard ICE automobile has more than 2,000 moving parts. Tesla cars have 18 moving parts!

--Baron Funds' Sept. 30, 2014 Newsletter

My Advice to Americans:

Don't buy a new gas-powered car. If the type of vehicle you want (e.g., pickup, van, SUV) is not available today, it will be soon. Hang on to your current vehicle just a little longer. The EV you want will be here within 5-10 years at most.

Look at the EVs already available:

Nissan Leaf

Smart EV

Fiat 500e

Kia Soul EV

Honda Fit EV

Mitsubishi iMEV

Mercedes B-Class

Chevy Volt

VIA Van & Pickup

BMW i3 and i8

Toyota RAV4 EV

Ford C-MAX Energi

Ford Fusion Energi

Honda Accord PHEV

Porsche Panamera

Tesla Model S

Cadillac ELR

Volkswagen e-Golf

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Other Countries Are Further
Along in the Manufacture and
Adoption of Electric Vehicles

Here Are Some Examples:



www.facebook.com/vehiculos.electricos.7



vehiculoselectricos@yahoo.es





**Pure Power
Extreme Efficiency**
100% Electric. Zero Emissions.

No hay nada como un camión verde o una van verde. Estos vehículos eléctricos de baja velocidad definen donde se dirige la industria. Como siempre con eco-amabilidad de los Vehículos Verdes, el destino es el mismo - la tecnología innovadora con lo último en seguridad, comodidad y rendimiento.

RENDIMIENTO Un cepillo de 3 fases motor de inducción eléctrica de CA con un montón de torque construido para un rendimiento y durabilidad. Frenos de potencia que permiten que el conductor haga una parada rápida. Estos vehículos eléctricos están equipados con componentes de alta calidad en un chasis totalmente de acero y el cuerpo que recibe un spray de imprimación para disuadir el óxido.

COMODIDAD Son vehículos amplios de baja velocidad que ofrecen la función de primera clase, el confort y el estilo como los asientos contorneados totalmente ajustables. Un montón de espacio para la cabeza y las piernas se combinan con una serie aparentemente interminable de configuraciones de carga / pasajeros. La cabina totalmente cerrada protege a los conductores de los elementos y es tranquilo y confortable.

SEGURIDAD Comprende de 3 contornos con puntos de seguridad delanteros, parabrisas de vidrio laminado de seguridad, componentes de la suspensión de servicio pesado, una distancia entre ejes grande con un marco de alta resistencia escalera, faros, luces traseras, faros antiniebla, intermitentes y luces de emergencia.

AHORRO Y EFICIENCIA Baterías libres de mantenimiento y las comodidades de un vehículo totalmente equipado. Puede que nunca comprará gas de nuevo!

Our Challenge:

To Hasten the EV Revolution

- 1) Workplace Charging as an Employee Benefit***
- 2) Get Solar Companies to Promote Oversizing of PV Systems to Power the Family Car***
- 3) Discounted Loan Rates for EV Purchases***
- 4) Media Awareness of Already Affordable EV's***
- 5) More Manufacturer Promotion of Their EV's***
- 6) Convince Utilities to Institute Lower Off-Peak Rates***

7) Get Tesla to Create a Police Car Model S or Model X

Note: EV's make great fleet purchases (low downtime)



8) *Convince Cab Companies to Purchase Teslas*



Tesla Model S automobiles are used as taxis in Vienna (left) and in Norway (right)

There are 167 Tesla Model S taxicabs in service at the Amsterdam airport.