Electrified Vehicles

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Global Trends
Global Industry & C0₂ Regulations

CO₂ Regulations (g/km)

- U.S. EPA Regulation
- China FC Regulation
- European Union Regulation
- Saudi Arabia Regulation

*Projection, ** Midpoint of Two Proposals Under Review
EV adoption independent of regulation will rise as barriers come down and will accelerate as range increases.
Electrification is the Future

Beijing, China
Stockholm, Sweden
Paris, France
Calgary, Canada
The next five years will drive an unprecedented wave of competitive regional design and marketing activity.
Electrification will reach a tipping point

**Anticipated Global Electrification Mix Rates**

- **2015**: 100% Internal Combustion Engine (ICE)
- **2020**: 10% ICE, 90% Hybrid Electric Vehicle (HEV)
- **2025**: 30% ICE, 70% HEV, 10% Zero Emissions Vehicle (ZEV)*
- **2030**: 50% ICE, 40% HEV, 10% ZEV*

* Full Battery Electric (BEV), Plug-in Hybrid Vehicle (PHEV) and fuel cells

Source: Navigant, LMC, BNEF, Juniper, MIT, IHS, Accenture, KPMG, PwC, JATO, FSS, Exxon, GM, Hyundai, Honda, Nissan, Toyota, Ford
Our strategic approach focuses on building a foundation for long term success

- **Play To Our Strengths**: Commercial, trucks, utilities, performance
- **Build Brand and Credibility**: Building on our iconic nameplates; Zero compromise battery electric vehicles
- **Leverage Scale and Technology**: Design, volume, manufacturing and purchasing power
- **Business Model Innovation**: Ecosystem approach - We’re redesigning our business models across the value chain (vehicle design, battery, manufacturing, distribution, ownership experience, and energy services)
We will spend over $11 billion on EVs by 2022

**U.S.**
- Positioned for EV leadership
- HEV offered on all mainstream models

**Europe**
- Strong BEV portfolio
- Mild hybrids

**China**
- BEVs and hybrids with JVs

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**EV Investment (Bils)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Original Investment</th>
<th>Revised Investment</th>
<th>2015 - 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 - 2020</td>
<td>$4.5</td>
<td>$6.7</td>
<td>$11</td>
</tr>
</tbody>
</table>

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16 Full Battery Electric Vehicles
40 Electrified Vehicles
By 2022, we will have a significant BEV and electrified lineup

- 16 Full Battery Electric Vehicles
- 40 Electrified Vehicles

- Dedicated BEV platforms
- Includes our trucks and vans
- Supports our commercial and Lincoln businesses
- Includes Zotye nameplates
EV strategy plays to our strengths, builds on our brands, leverages scale and innovates across the value chain

Performance Battery Electric SUV (300 mile range) by 2020

- HEV F-Series
- HEV Mustang
- PHEV Transit
- Ionity Fast Charging Infrastructure
Despite Ford EV Plans, Present Options are Limited:

- **Police Vehicles** – Both the Police Responder Hybrid Sedan and the all-new Ford Police Interceptor Utility
- **Fusion** – Both a HEV and PHEV (Plug in HEV)
- **Escape** -- HEV Starting Later in 2019
- **Explorer** – HEV Starting Later
- **F150** – HEV Starting in 2020
Ford is investing $1 Billion in Chicago and adding 500 new jobs.

- Ford Police Interceptor Utility is designed and Engineered in Dearborn and built in Chicago.
- Ford is investing $1 Billion in Chicago Assembly Plant and Chicago Stamping Plant, and adding 500 new jobs.
- Ford produces more vehicles in the U.S. than any other manufacturer.
- Ford employs more hourly workers than any other auto manufacturer.
FUEL SAVINGS SCENARIO - DRIVING

POLICE INTERCEPTOR UTILITY
3.7L AWD

ALL-NEW POLICE INTERCEPTOR UTILITY
STANDARD HEV AWD

20,000 MILES DRIVEN PER YEAR

$\div 17 \text{ mpg (EPA-estimated combined rating)}$

$= 1,176 \text{ Gallons of fuel consumed per year}$

$\div 24 \text{ mpg (projected EPA-estimated combined rating)}$

$= 833 \text{ Gallons of fuel consumed per year}$

Potential savings: 343 gallons of fuel per year
FUEL SAVINGS SCENARIO – AT IDLE

POLICE INTERCEPTOR UTILITY
3.7L AWD

ALL-NEW POLICE INTERCEPTOR UTILITY
STANDARD HEV AWD

4.9 HOURS IDLING PER 8-HOUR SHIFT

\[
\begin{align*}
\text{POLICE INTERCEPTOR UTILITY} & : \\
& \times 0.465 \text{ gallons of fuel consumed per hour} \\
& \times 2 \text{ shifts per day} \\
& \times 365 \text{ days per year} \\
& = 1,663 \text{ gallons of fuel consumed per year}
\end{align*}
\]

\[
\begin{align*}
\text{ALL-NEW POLICE INTERCEPTOR UTILITY} & : \\
& \times 0.204 \text{ gallons of fuel consumed per hour} \\
& \times 2 \text{ shifts per day} \\
& \times 365 \text{ days per year} \\
& = 730 \text{ gallons of fuel consumed per year}
\end{align*}
\]

Potential savings: \textbf{933} gallons of fuel per year
FUEL SAVINGS SUMMARY

POLICE INTERCEPTOR UTILITY
3.7L AWD

343 Gallons saved driving

+933 Gallons saved at idle

1,276 TOTAL gallons saved per year

$3,509 in potential savings per vehicle, per year (example fuel price of $2.75 per gallon.)

And a potential 25,560 lbs. of CO₂ output reduced per vehicle, per year

“2020 Ford Police Interceptor Looks Greener Than Ever”
- CarBuzz
FUEL SAVINGS SUMMARY

In total, comparing the two, the **all-new**
Police Interceptor Utility HEV AWD potentially saves:

<table>
<thead>
<tr>
<th>Price per Gallon</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3.00 / gallon</td>
<td>$3,828</td>
</tr>
<tr>
<td>$3.50 / gallon</td>
<td>$4,466</td>
</tr>
<tr>
<td>$4.00 / gallon</td>
<td>$5,104</td>
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<tr>
<td>$4.50 / gallon</td>
<td>$5,742</td>
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</tbody>
</table>
Looking at a 4-6 year holding period, the all-new Police Interceptor Utility HEV AWD potentially saves:

<table>
<thead>
<tr>
<th></th>
<th>4 YEARS</th>
<th>5 YEARS</th>
<th>6 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>At $3.00 / gallon</td>
<td>$15,312</td>
<td>$19,140</td>
<td>$22,968</td>
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<tr>
<td>At $3.50 / gallon</td>
<td>$17,864</td>
<td>$22,330</td>
<td>$26,976</td>
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<td>At $4.00 / gallon</td>
<td>$20,416</td>
<td>$25,520</td>
<td>$30,624</td>
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<tr>
<td>At $4.50 / gallon</td>
<td>$22,968</td>
<td>$28,710</td>
<td>$34,452</td>
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</tbody>
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To be continued -
The best is yet to come...