

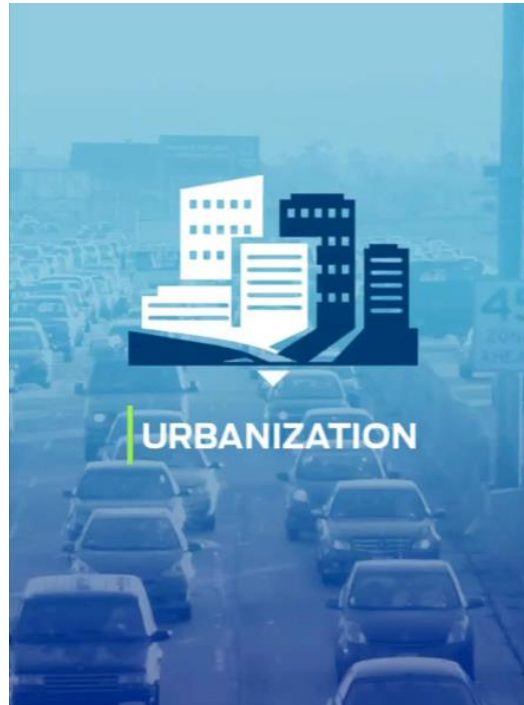
Electrified Vehicles

Brian Arvila

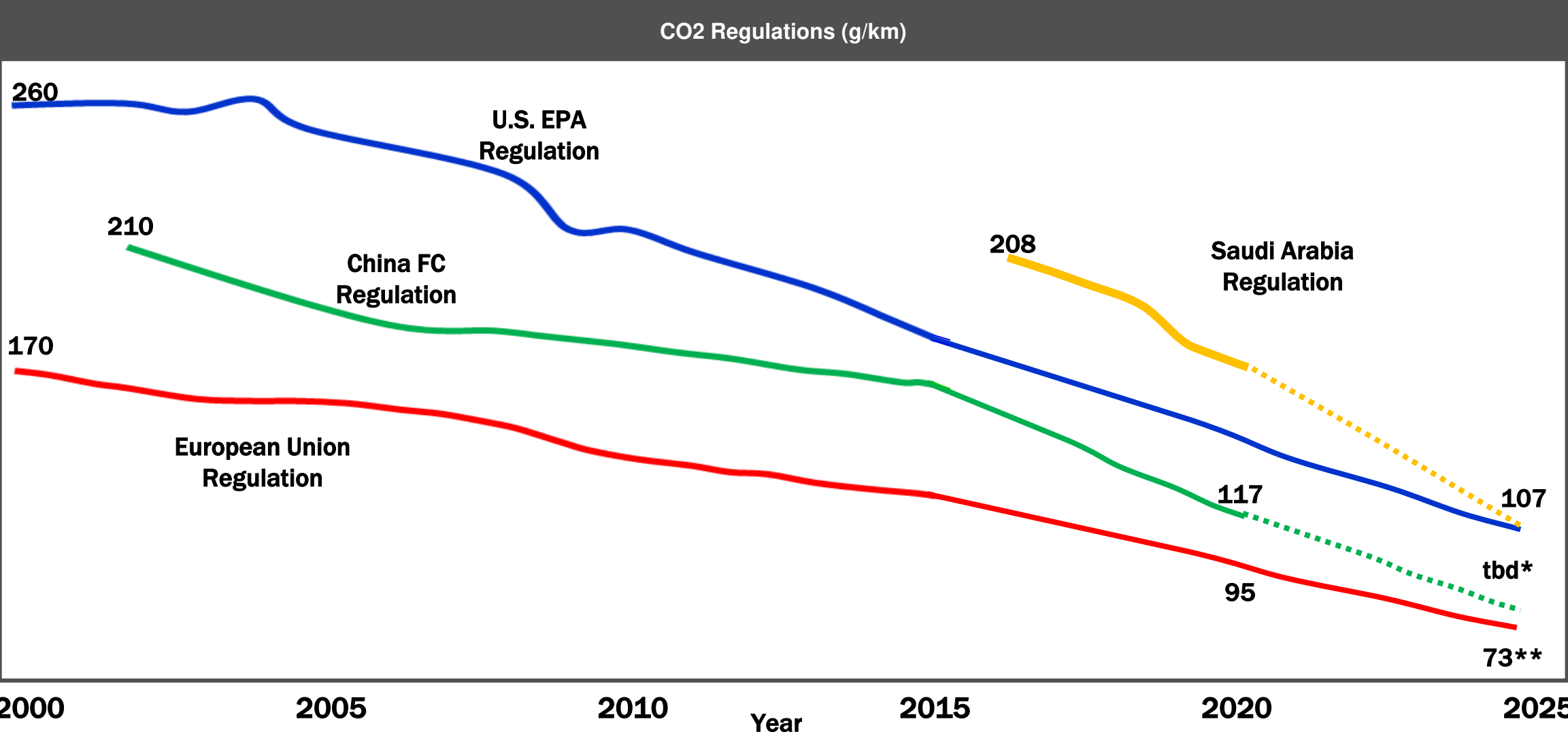
Fleet Sustainability & Advanced Technology
Manager



Global Trends

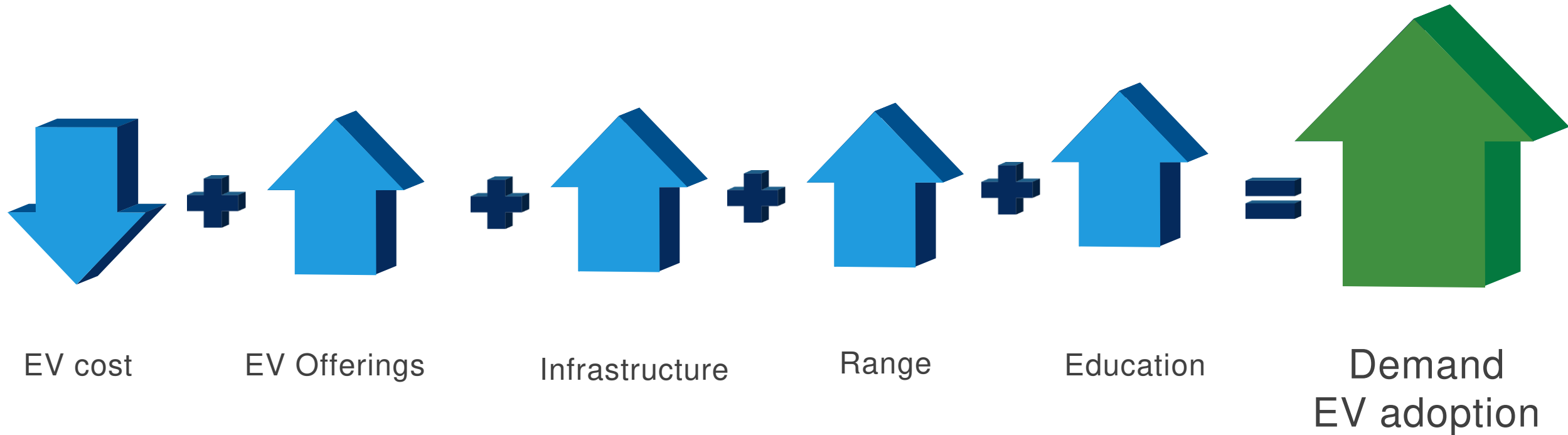


Global Industry & CO₂ Regulations



*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



The next five years will drive an unprecedented wave of competitive regional design and marketing activity



BEV Vehicles

BEV Industry Volume 2025



CH

250

3.6 mil



EU

100

2.0 mil



US

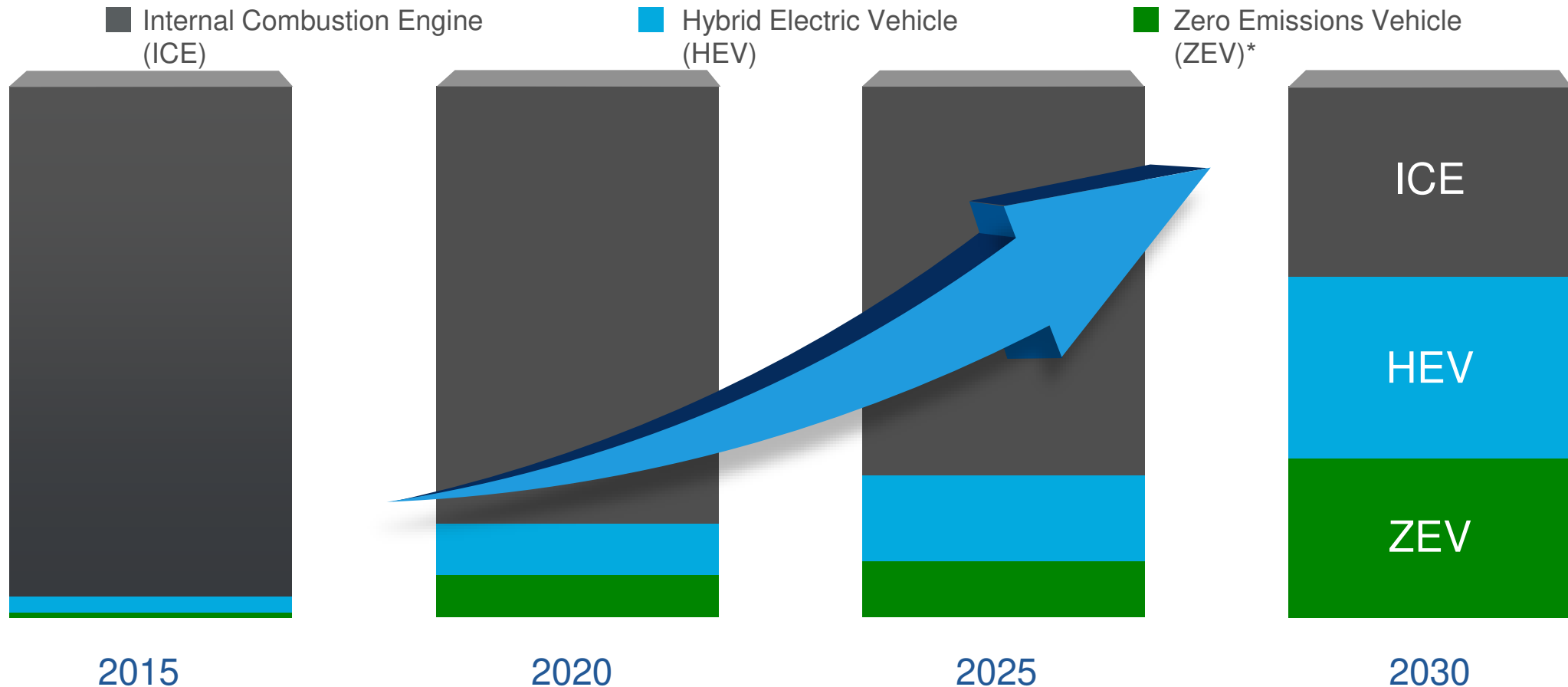
80

500k

Electrification will reach a tipping point



Anticipated Global Electrification Mix Rates



* 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

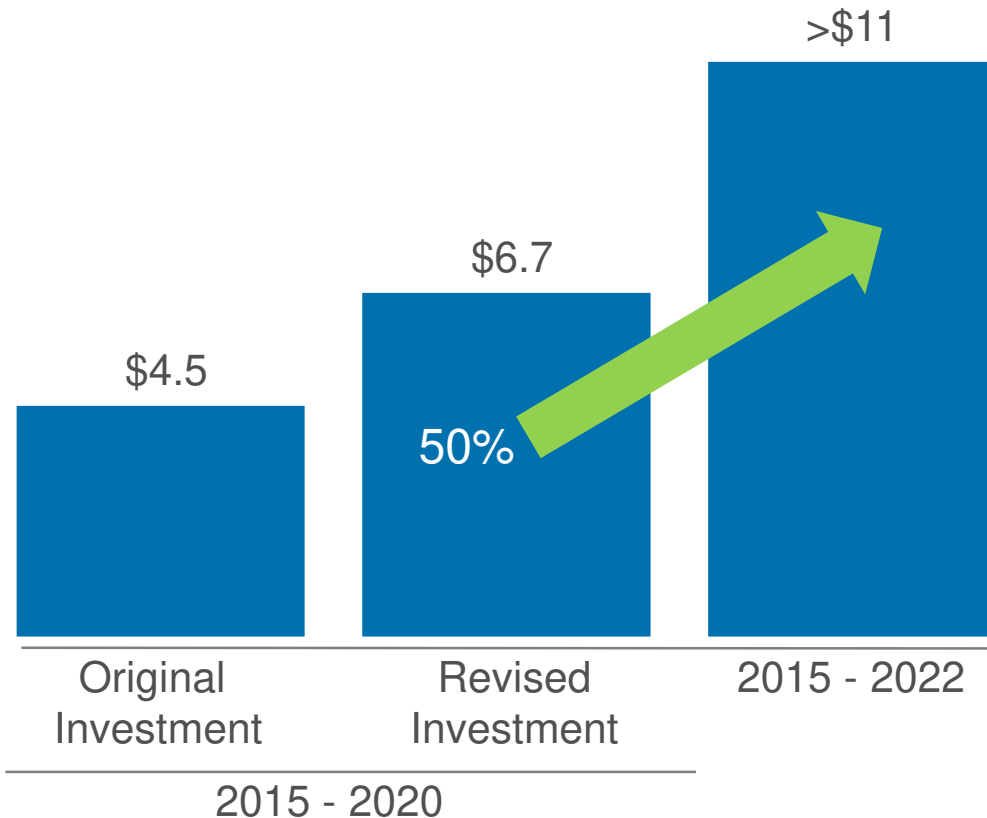
Business Model Innovation

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



EV Investment (Bils)



U.S.

- Positioned for EV leadership
- HEV offered on all mainstream models

Europe

- Strong BEV portfolio
- Mild hybrids

China

- BEVs and hybrids with JVs

16

Full
Battery
Electric
Vehicle
s

40

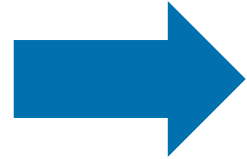
Electrified
Vehicles

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



PHEV Transit



HEV Mustang



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 Late
- **F150** – HEV Starting in 2020



FORD INVESTING \$1 BILLION IN AND ADDING 500 NEW JOBS CHICAGO

- 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

BUILT *Ford* PROUD



FUEL-SAVINGS SCENARIO



| FORD **FLEET**

FUEL SAVINGS SCENARIO - DRIVING

**POLICE
INTERCEPTOR
UTILITY**
3.7L AWD



**ALL-NEW POLICE
INTERCEPTOR
UTILITY**
STANDARD HEV AWD

20,000 MILES DRIVEN PER YEAR

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

= 1,176 Gallons of fuel consumed per year

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

= 833 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

x .465 gallons of fuel consumed per hour
x 2 shifts per day
x 365 days per year
= 1,663 gallons of fuel consumed per year

x .204 gallons of fuel consumed per hour
x 2 shifts per day
x 365 days per year
= 730 gallons of fuel consumed per year

Potential savings: **933** gallons of fuel per year

FUEL SAVINGS SUMMARY

**POLICE
INTERCEPTOR
UTILITY**
3.7L AWD



**ALL-NEW POLICE
INTERCEPTOR
UTILITY**
STANDARD HEV 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

**POLICE
INTERCEPTOR
UTILITY**
3.7L AWD



**ALL-NEW POLICE
INTERCEPTOR
UTILITY**
STANDARD HEV AWD

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

At \$3.00 / gallon **\$3,828**

At \$3.50 / gallon **\$4,466**

At \$4.00 / gallon **\$5,104**

At \$4.50 / gallon **\$5,742**

FUEL SAVINGS SUMMARY

**POLICE
INTERCEPTOR
UTILITY**
3.7L AWD



**ALL-NEW POLICE
INTERCEPTOR
UTILITY**
STANDARD HEV AWD

Looking at 4-6 year holding period, the **all-new** Police Interceptor Utility HEV AWD potentially saves:

	4 YEARS			5 YEARS			6 YEARS		
At \$3.00 / gallon	\$15,312	\$19,140	\$22,968						
At \$3.50 / gallon	\$17,864	\$22,330	\$26,976						
At \$4.00 / gallon	\$20,416	\$25,520	\$30,624						
At \$4.50 / gallon	\$22,968	\$28,710	\$34,452						

To be continued -

**The best is yet to
come...**

