



U.S. General Services Administration

FedFleet



2020

The EV Market
History, GSA Offerings, and Forecast

Casey Crandell

58,604



History of EVs
in the Federal
Fleet

Current EV
Offerings

Market
Forecast

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**History of EVs
in the Fleet**

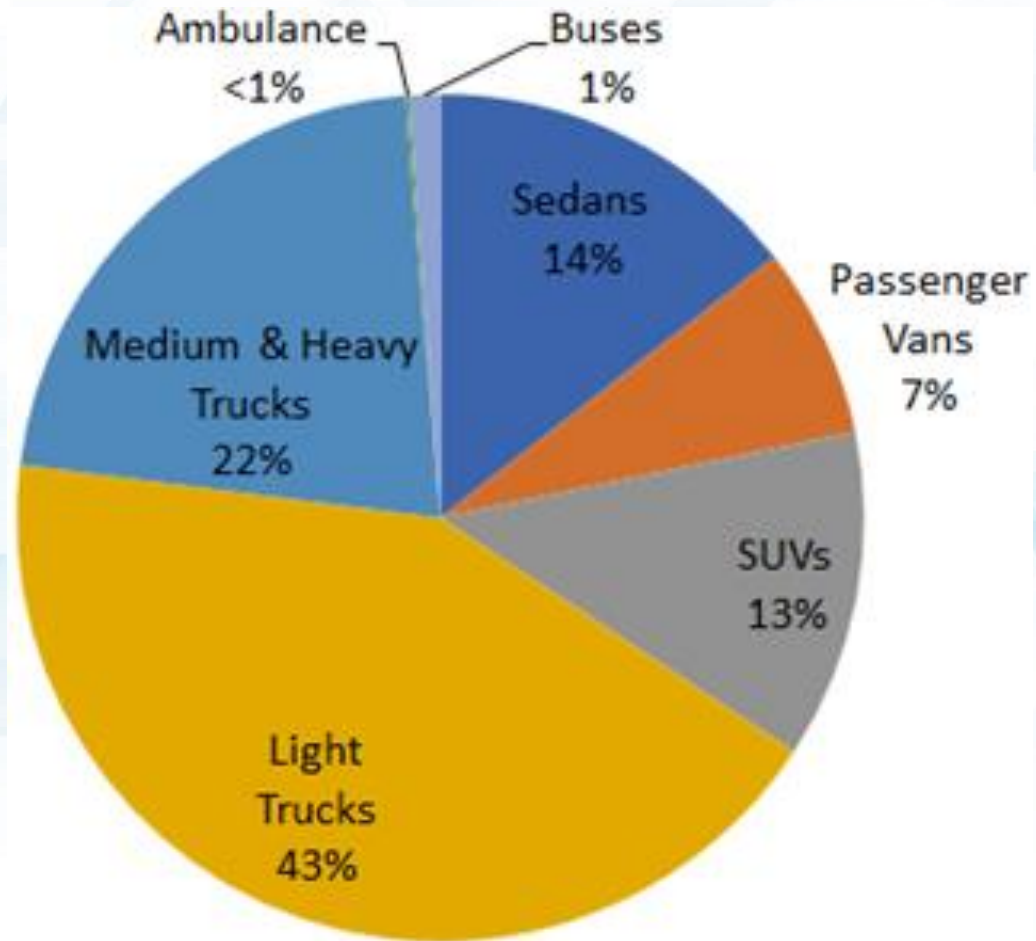
Current EV Offerings

Market Forecast

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The Federal Fleet is Mostly Larger Vehicle Types



US Market:
1.80%

Federal:
0.86%

Historical Federal Context for EVs

2010 - First GSA EV Purchases & Requests for Employee Charging

2014 - GSA Fleet Expands EV Initiative

2016 - EV Deployment Initiative

2019 - Federal fleet service cards accepted at EV charging stations

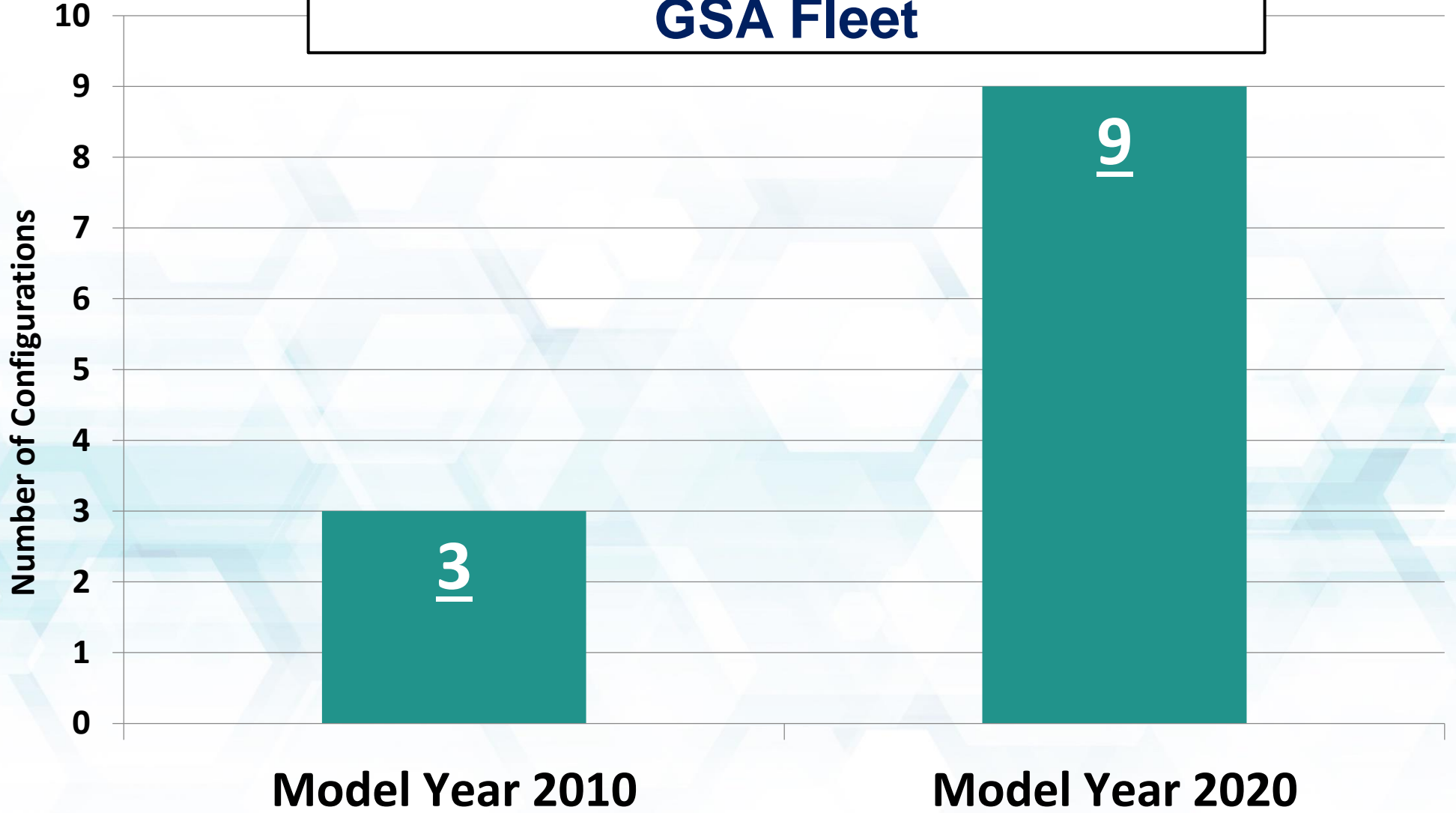
2012 - GSA Launches 1st EV Initiative

2015 - E.O. 13693 & FAST Act

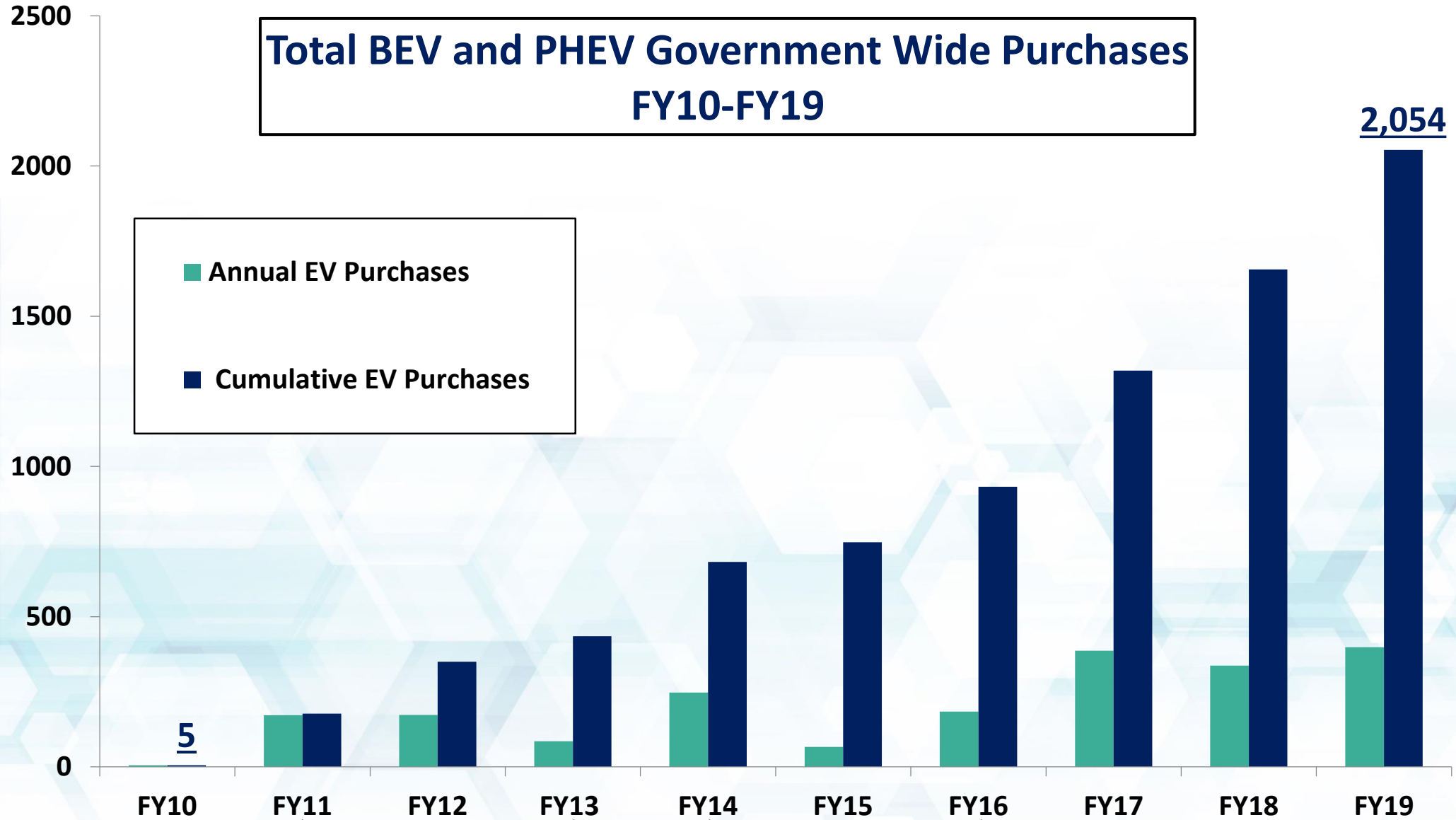
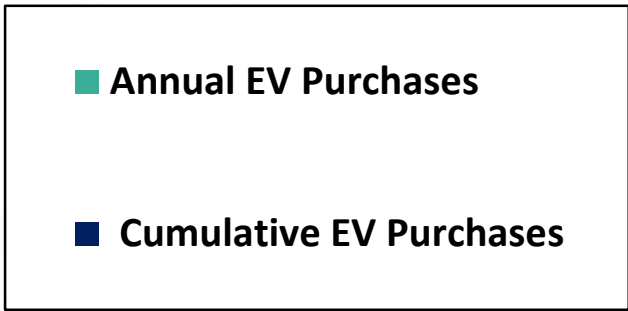
2018 - E.O. 13693 Replaced with E.O. 13834



EV Configurations Offered Through GSA Fleet



Total BEV and PHEV Government Wide Purchases FY10-FY19



↑ Pilot Program (FY11)
↑ Sequestration (FY13)
↑ Pilot Program (FY14)
↑ EV Initiative (FY16)





History of EVs
in the Fleet

**Current
EV
Offerings**

Market
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Current Offerings: Electric Sedans



SIN 8E - Chevy Bolt - BEV



SIN 8E - Nissan Leaf - BEV



SIN 9P - Ford Fusion Energi - PHEV



SIN 8P - Hyundai Ioniq - PHEV

Current Offerings: Larger Electric Vehicles



SIN 20P - Chrysler Pacifica - PHEV



SIN 96P - Mitsubishi Outlander - PHEV



SIN 98P – Ford Escape - PHEV



SIN 98P - Kia Niro - PHEV

Schedule EVs



**Passenger/Cargo Van
Zenith**

80-120 mile range

\$98K-\$109K

Seats up to 16



**Shuttle Bus
Phoenix MotorCars-Zues**

100 mile range

Up to \$263K

12-20 passengers



**Transit Bus
Proterra**

55-350 mile range

\$660K-\$771K

Charging stations up to \$316k

- Low Speed Electric Vehicles Also Available

Charging Station Basics

Level 1



- **2-5 miles of range/hour**
- 120 volt. 7-21 hours for full charge. Cord provided with vehicle. Wall outlet or dedicated station.
- **Stations/Cordset: \$0-\$1,500**
- Harder to capture data

Level 2



- **10-20 miles of range/hour**
- 240 volt. 2-10 hours for full charge. Most can collect data w/ subscription services.
- **Station: \$500-\$10,000**
- **Data: \$200-\$300 annually**
- Works with any type of EV

DC Fast Charge



- **60-80 miles of range/ ½ hour**
- 350+ volt. Full charge in 1-2 hours or less for full charge. Collect data with subscription services.
- **Station: \$13,000-\$50,000**
- **Data: \$200-\$600 annually**
- Not all EVs can use

How to Plan for EV Deployment



Deployment tools

Lists sent to HQs,
FSRs can access
maps



Telematics Data

Once deployed,
use data to find
optimal use cases



Site Assessments

Determine needs for
additional electrical
infrastructure

Options for Purchasing EVSE



- **GSA blanket purchase agreement (BPA)**
 - Pre-negotiated and pre-competeted solution open to all GSA customers
 - Level 1, 2, and DC fast charge stations from 5 different manufacturers + data network plans
- **GSA Schedules ([GSAAdvantage.gov](https://www.GSAAdvantage.gov))**
 - Level 1, 2, and DC fast charge stations from 12 different manufacturers + data network from 3 different manufacturers
 - Station prices range from \$500 - \$40,000
- **Open Market**
 - Use when desired configurations / specifications are not available from GSA
 - Reference Federal Acquisition Regulation (FAR) Parts 13 and 15





History of EVs
in the Fleet

Current EV
Offerings

**Market
Forecast**

EV Offerings are Set to Increase Significantly



20 EVs
by 2023



**40
Hybrids &
EVs**
by 2022



14 EVs
by 2022

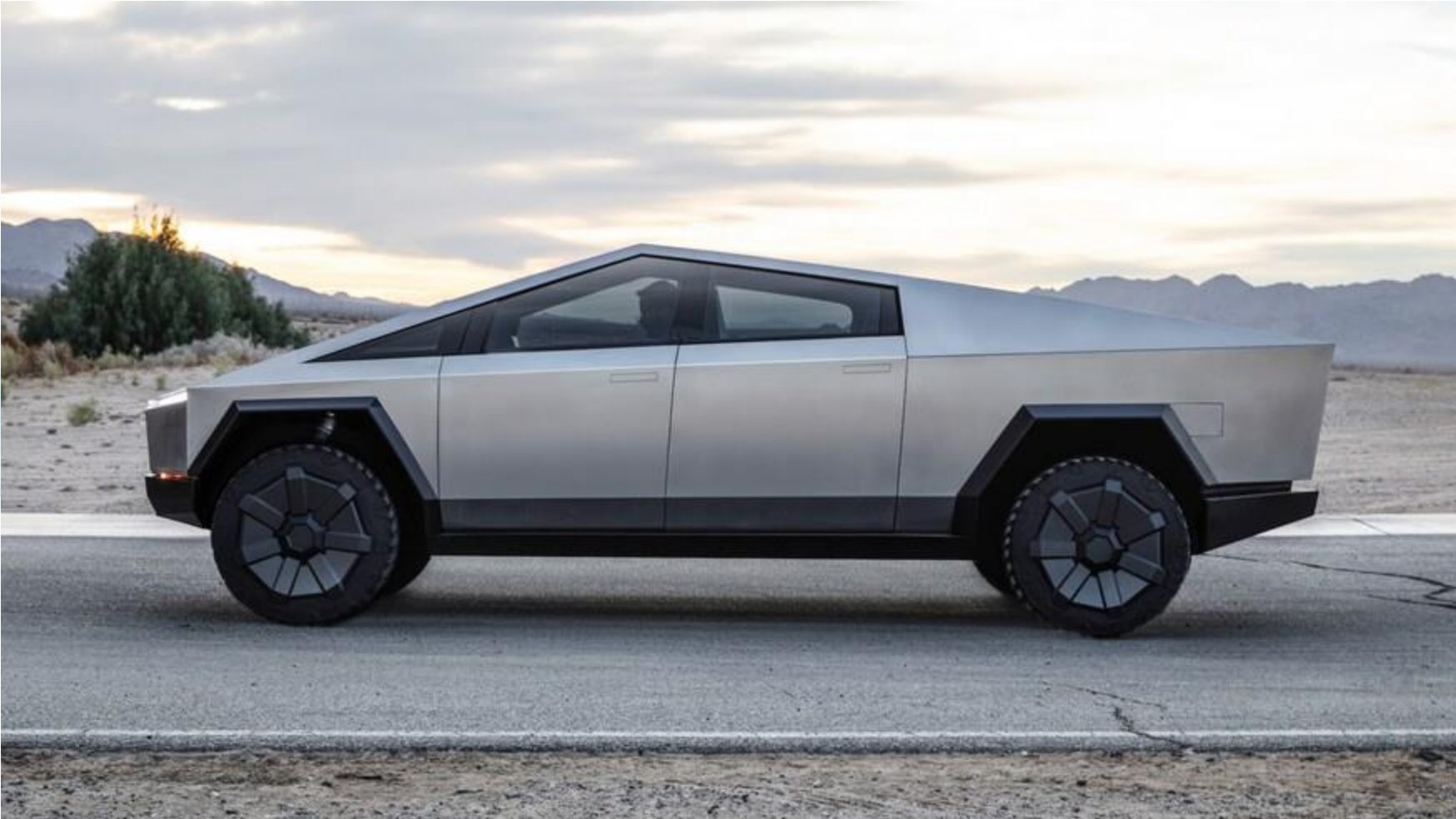


16 BEVs
by 2022



12 BEVs
by 2022

Electric Trucks on the Horizon



Five Electric Trucks Expected by 2021, with Likely Availability for Federal Customers



Factors Impacting EV Market

- Costs, battery technology and vehicle advancement
- Consumer demand
- Subsidies and government incentives
- Uncertainty pertaining to domestic CAFÉ standards; conversely, increasing emissions regulations and climate awareness abroad
- More efficient/cleaner diesel engine technology in larger truck segment
- Emerging mobility models of autonomy, connectivity, and shared mobility

If Nothing Else, Remember....

Electric vehicles already have an **established and successful history** in the federal fleet

Current GSA electric offerings can **support a wider range of missions** than ever before

Stay on the lookout for **falling prices and new vehicle types** going electric in the near future

Resources

- www.gsa.gov/afv
 - Guidance on AFV regulations & the AFV Guide
- www.gsa.gov/evse
 - Guidance on charging stations and the charging station BPA
- Contact us at gsafleetafvteam@gsa.gov



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