

Hybrid Electric Vehicles (HEVs)

Battery Electric Vehicles (BEVs)

Fuel Cell Electric Vehicles (FCEVs)

-Toyota's Pathway to Sustainable Electrification

Kim Menke

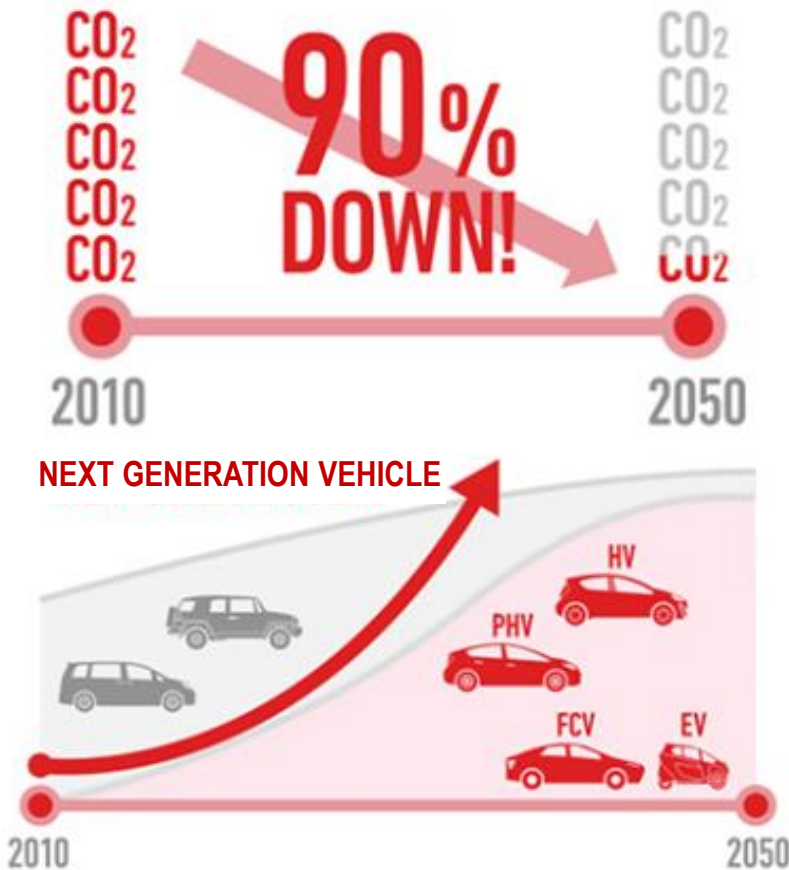
Regional Director Government Affairs

Toyota Motor North America

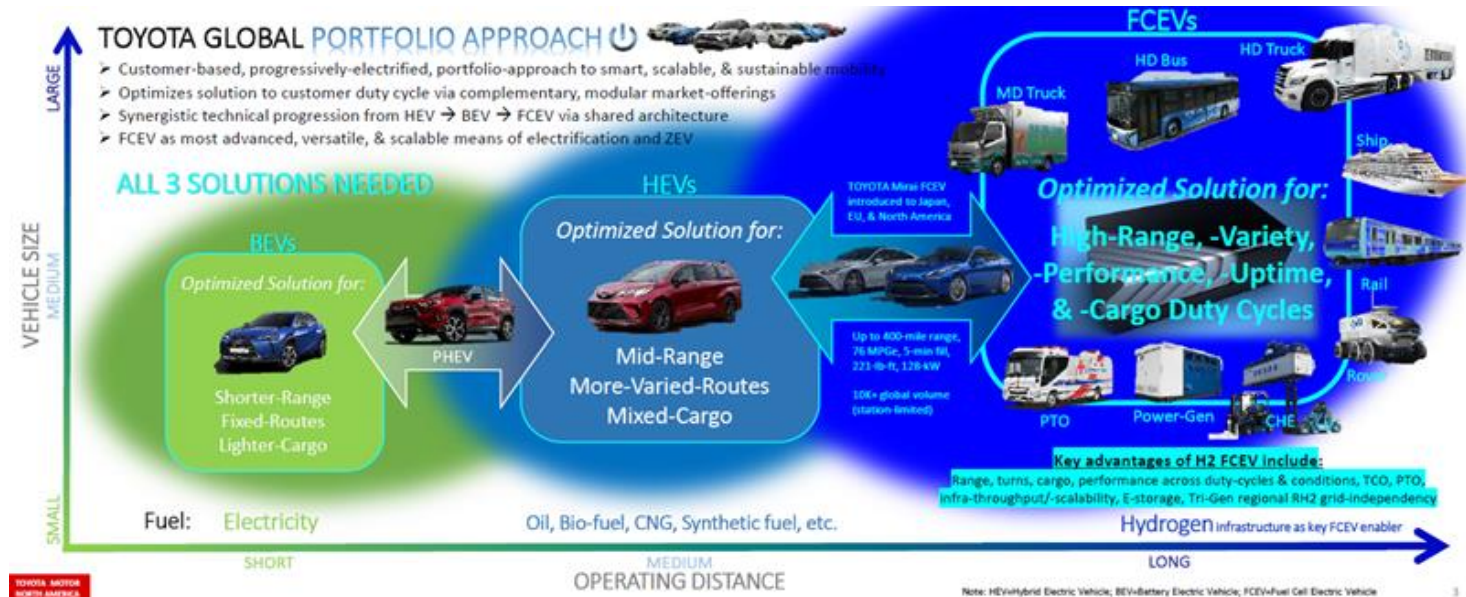
October 18, 2022

Toyota Motivation

Toyota 2050 Environmental Challenge



- Seek a **90% reduction in tailpipe emissions by 2050**, from 2010 levels, on a global basis
- Meet customer transport needs anywhere in the world with a portfolio of electrified vehicle options



- Accelerate vehicle electrification globally to achieve by 2030
 - Sales of 8M electrified vehicles per year
 - \$70B for new electrified development

Toyota US Electric-Drive Portfolio

Compact/
Medium



Corolla Hybrid



Prius



Prius AWD

Large/
Premium



Camry Hybrid



Avalon Hybrid



ES 300h



LC 500h

SUV



Venza

**Toyota
Hybrid**



RAV4 Hybrid



UX 250h

**Lexus
Hybrid**



LS 500h



NX 300h

Minivan



Highlander Hybrid



RX 450h



Sienna



Prius Prime PHEV

Plug-In Electric



RAV4 Prime
PHEV

Hydrogen Fuel Cell



Mirai FCEV

Battery Electric



bZ4x

Electrification Progress Takes Time

- 1st Prius hybrid launched in US in 1999
- +4M electric-drive Toyota & Lexus sold in US
- ~25% of current Toyota & Lexus sales electrified
- Expect +75% electrified by 2030

Commercial Class 8 Truck Project with PACCAR

10

CLASS 8 TRUCKS

4

UNIQUE OPERATORS

2

NEW HD H2 FUELING STATIONS



TMMK MILESTONES

- Established: January 23, 1986
- Initial Capital: \$1.18 billion
- Total Investment: \$12 billion
- Area: 1,350 acres
- Building Space: 9.2 million sq. feet



TMMK Established
1986

Start of Engine
Production
1989

5 Millionth Vehicle
Produced
2003

10 Millionth Vehicle
Produced
2014

Today
2022



Start of Vehicle
Production
1988

Vehicle Plant 2 Start Production
1994

 Start of Lexus
Production
2015

TNGA
Platform
Toyota
New Global
Architecture
2017

Start of RAV4
Production
2019



TMMK PRODUCTION – POWERTRAIN & DIEs

Powertrain



L4



V6



2023 Fuel Cell Module

Parts

TMMK
Annual Vol
486 Part No.
700 Million
Parts/Yr

Die Mfg.



Customers

TMMK	TMMC	TMMI	TMMMS	TMMBC
				
CAMRY	AVALON	RAV4	SIENNA	COROLLA
				
RAV4	LEXUS ES	LEXUS NX	HIGHLANDER	

2023 SOP Fuel Cell Module,
Class8 OEMs



HINO



KENWORTH

THE FOCUS OF TRANSFORM TMMK

❖ *TMMK transformation is focused on our people, our plant, and our products*



2012

2013

2017

2018

2019

2020

2021

2022

2023
~25



PEOPLE



PLANT



PRODUCTS



Hydrogen Fuel Cell Day

Kentucky Transportation Cabinet

May 16, 2022



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Thank You

