

DPS

DIESEL PROGRESS SUMMIT

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Balancing the transition from traditional diesel
to alternative power and fuel solutions

Created and organized by



Disclaimer

Unless stated otherwise, all the figures given in this presentation refer to continuing operations.

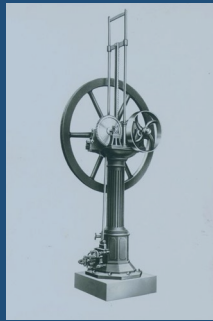
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The forward-looking statements made in this document will not be updated.

Founded in 1864: oldest engine factory in the world



Nicolaus A. Otto
(1832-1891)



Engine no. 1
(1867)



Factory in Cologne
(~1900)

Today: provider of drive systems for different applications



Construction machinery



Material handling



Agricultural machinery

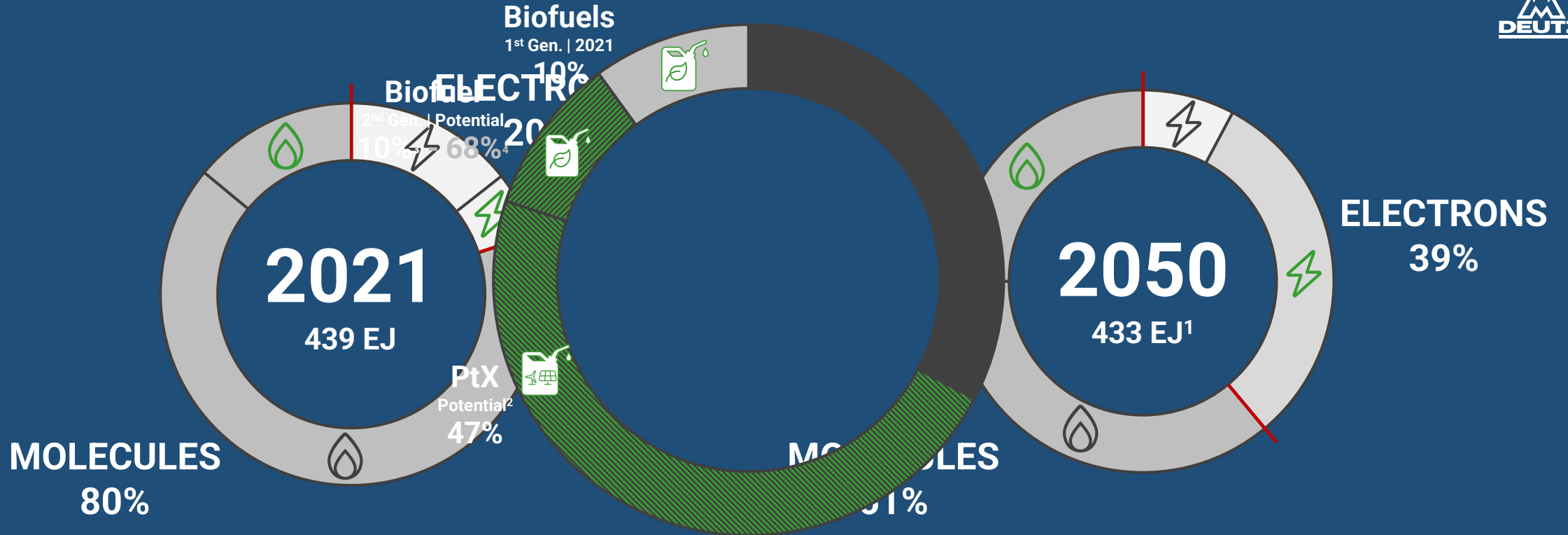


Stationary systems



Other

The World's Final Energy Consumption – Today and 2050



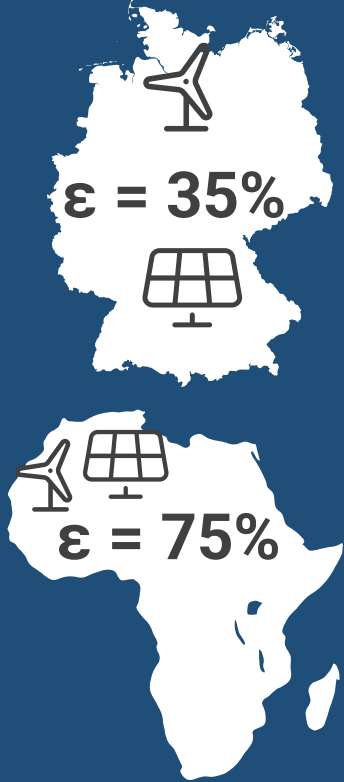
Sources: ¹IEA World Energy Outlook 2022 – APS Scenario | ²Fraunhofer IEE - PTX-ATLAS (2023) | ³Neste | ⁴Concawe Review, Volume 27, No.2

TODAY'S WORLD ENERGY CONSUMPTION
IS HIGHLY DEPENDENT ON
FOSSIL MOLECULES



BEYOND ELECTRIFICATION
GREEN MOLECULES
MUST PLAY DECISIVE ROLE

Considerations on well-to-wheel efficiency



BATTERY-ELECTRIC

18%



HYDROGEN

16%

Sources: Umweltbundesamt | Frontier Economics | FVV | DEUTZ AG

IF HYDROGEN AND eFUELS ARE PRODUCED IN "SWEET SPOTS", THEY WILL BECOME

COMPETITIVE

WE ARE OPEN TO

DIFFERENT TECHNOLOGIES

WHEN MASTERING OUR INNOVATIVE STRENGTH

With growing demand, we will ensure that the world keeps moving

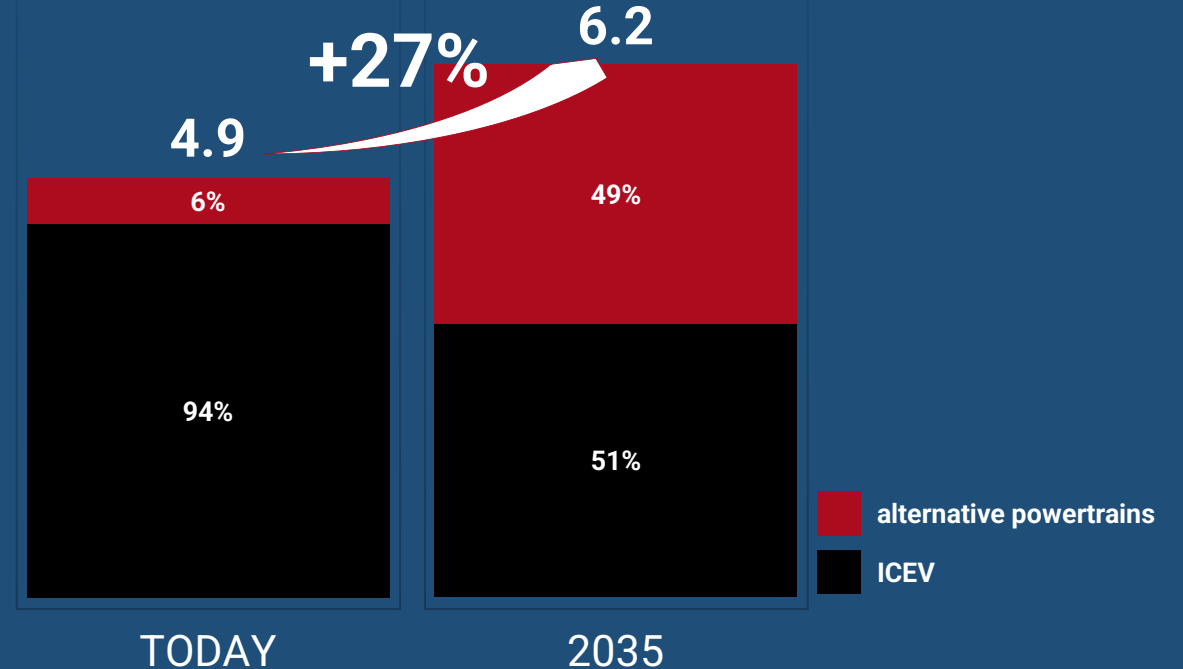


CONSTRUCTION
MATERIAL HANDLING
AGRICULTURE



19 – 560 kW

UNIT PRODUCTION / MILLIONS



COMPLACENCY

IS NOT AN OPTION – MANKIND IS GROWING
AND SO ITS DESIRE FOR FOOD,
HOUSING AND INFRASTRUCTURE



WE NEED
POWERTRAINS
TO KEEP THE WORLD MOVING

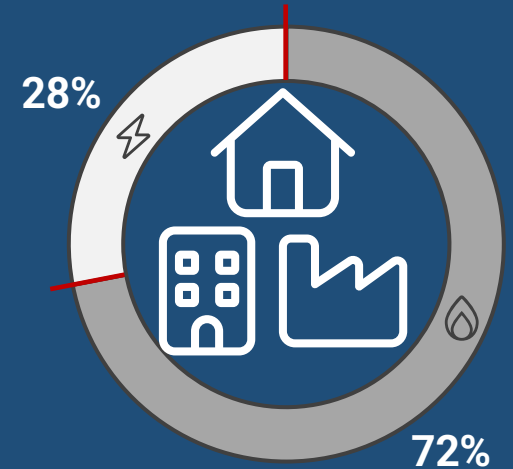
The diverse range of off road mobile machinery applications



MOBILITY



TODAY'S ROLE OF ELECTRONS IN MEETING STATIONARY POWER DEMAND



ENERGY DEMAND

OFF-ROAD APPLICATIONS FACE
VERSATILE LOAD PROFILES

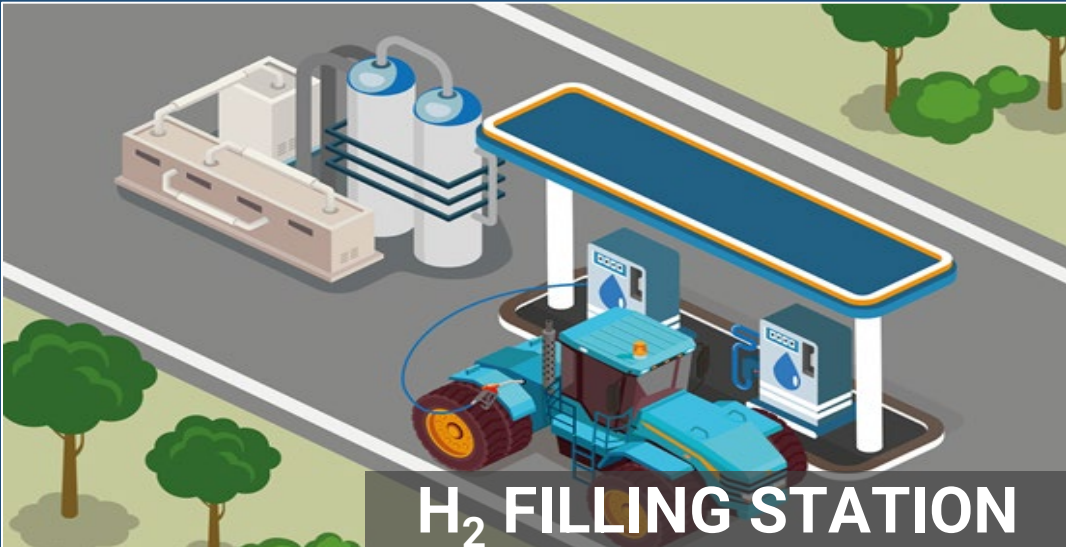
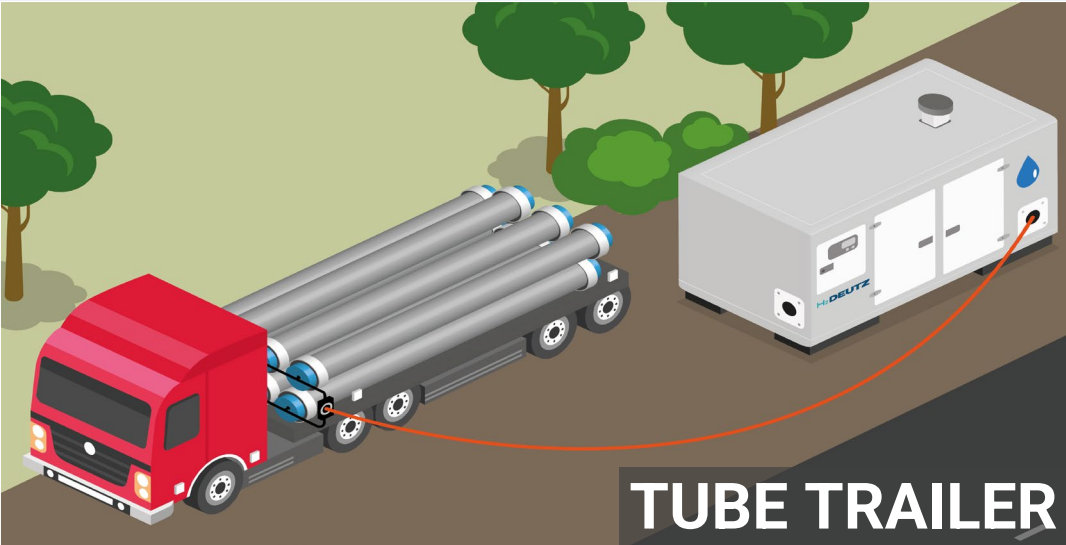


THERE IS NO
ONE-FITS-ALL SOLUTION

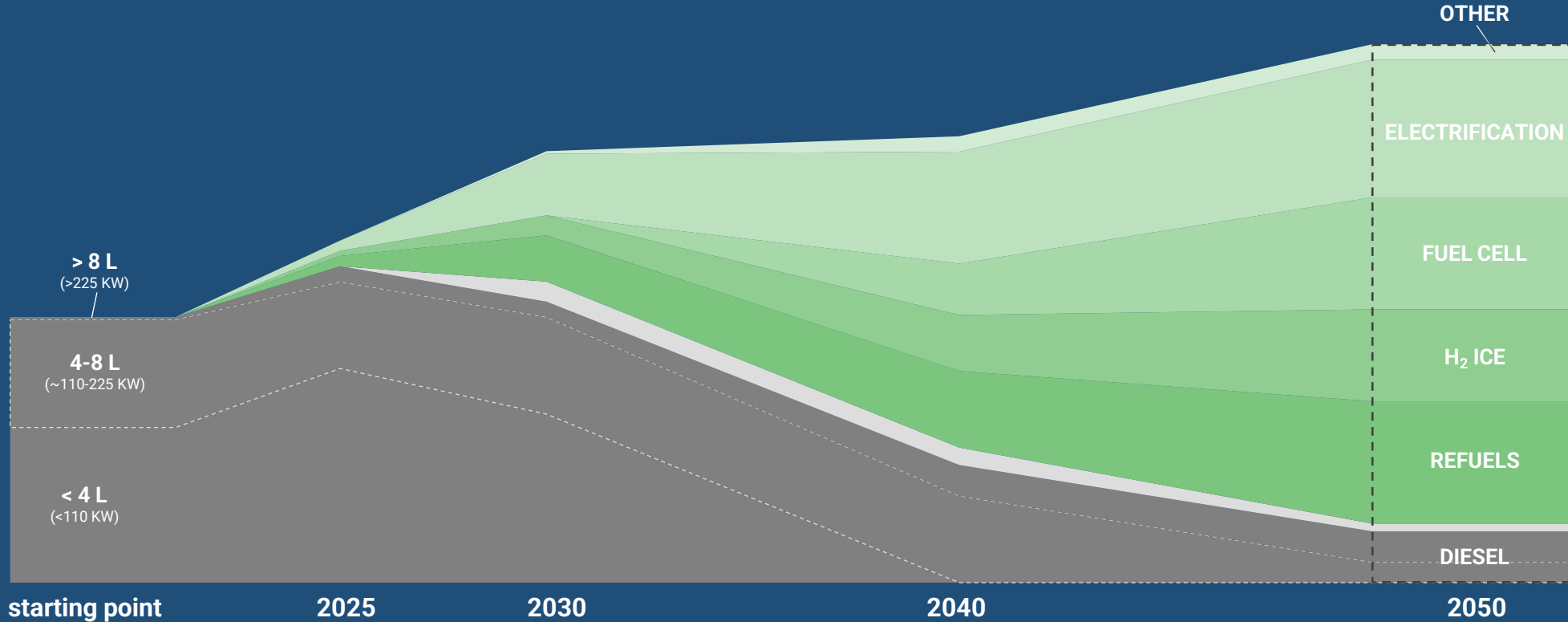


WE ENSURE THE WORLD
KEEPS MOVING

Moving from a pure engine company to a solution provider



Outlook: technology allocation of DEUTZ powertrains until 2050



DIESEL

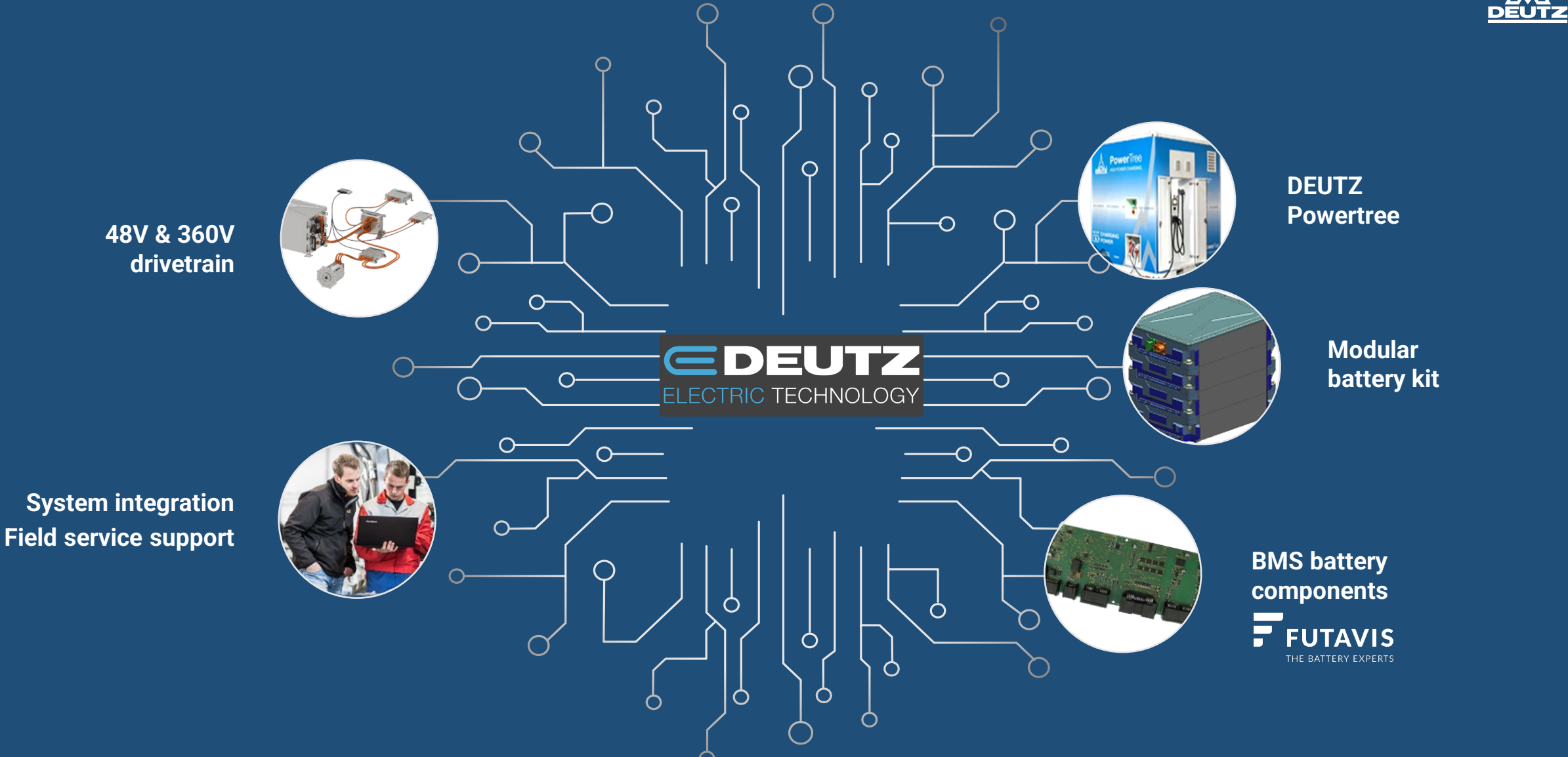
STILL DOMINANT UNTIL 2030



TECHNOLOGY TRANSITION

FOR ABOUT 90% OF THE PORTFOLIO BY 2050

Electrification: E-DEUTZ ecosystem



48V & 360V drivetrain

DEUTZ Powertree

Modular battery kit

System integration
Field service support

BMS battery components
FUTAVIS
THE BATTERY EXPERTS

Electrification: DEUTZ 360V powertrains for the CO₂-free use case



POWERFUL AND COMPACT

System power up to 120 kW
Optimized formfactor
Flexible system configurations



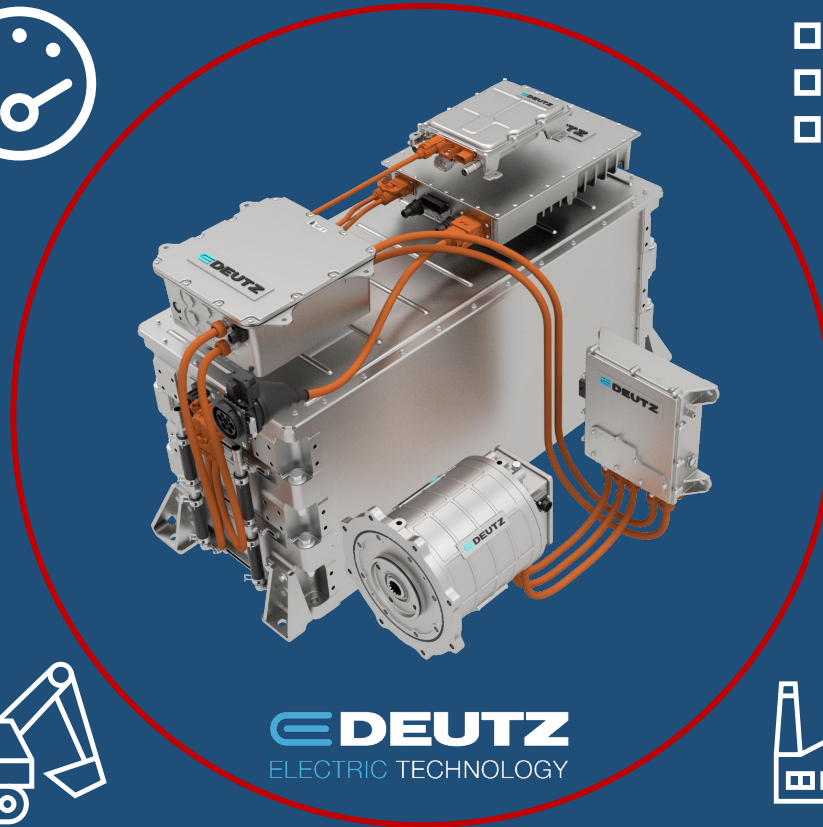
ROBUST

Especially designed for
off-highway applications

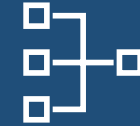


FIELD TESTED

Applications equipped with 360V system



DEUTZ
ELECTRIC TECHNOLOGY



MODULAR

Flexible system configurations



SAFE

High voltage system acc. to ISO 26262



AVAILABLE

Ready for small series production

H₂ ICE: DEUTZ 'TCG 7.8 H2' hydrogen engine for the CO₂-free use case

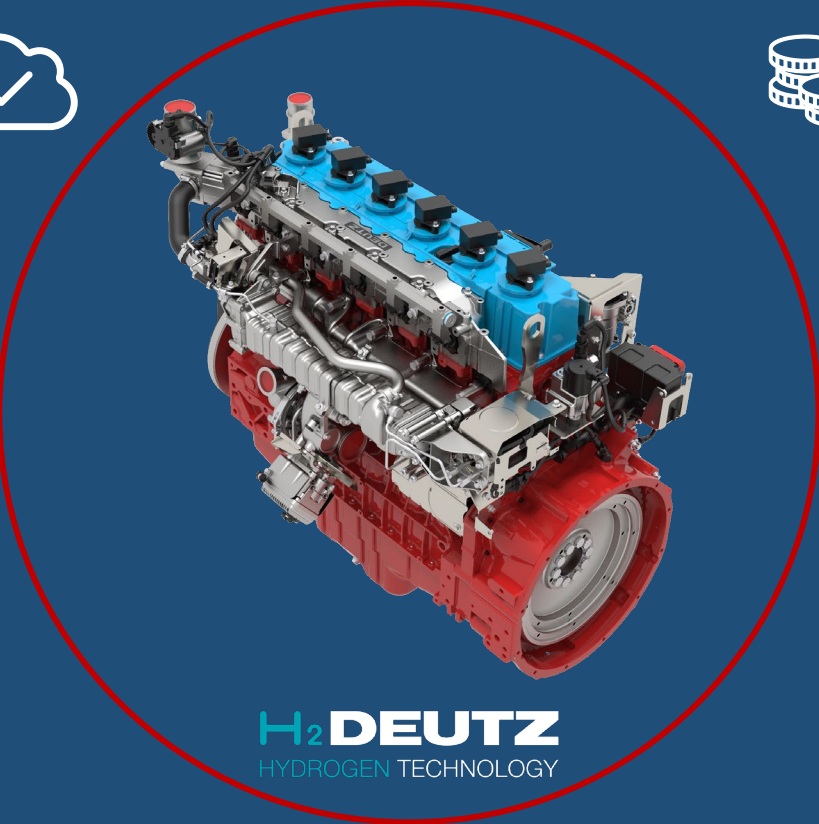
CO₂-FREE TECHNOLOGY

Meets current emission limits for zero-emission heavy-duty vehicles (<1g CO₂/kWh)



HIGH PERFORMANCE

Power density and efficiency comparable to diesel engine



H₂ DEUTZ
HYDROGEN TECHNOLOGY



ECONOMICAL ALTERNATIVE

Attractive overall cost perspective



HIGH RELIABILITY

Based on well-known engine technology
Quick Industrialization possible

1st engine on test bench



1st demonstrator



Prototypes



Field testing

2024: SoP




DEUTZ guarantees zero emission and full power

URBAN



H₂ H₂ supply

 power supply



DEUTZ PowerTree



 high load factor



 **DEUTZ** low load factor

RURAL no infrastructure



H₂ H₂ supply



DEUTZ TCG H₂ genset



DEUTZ PowerTree

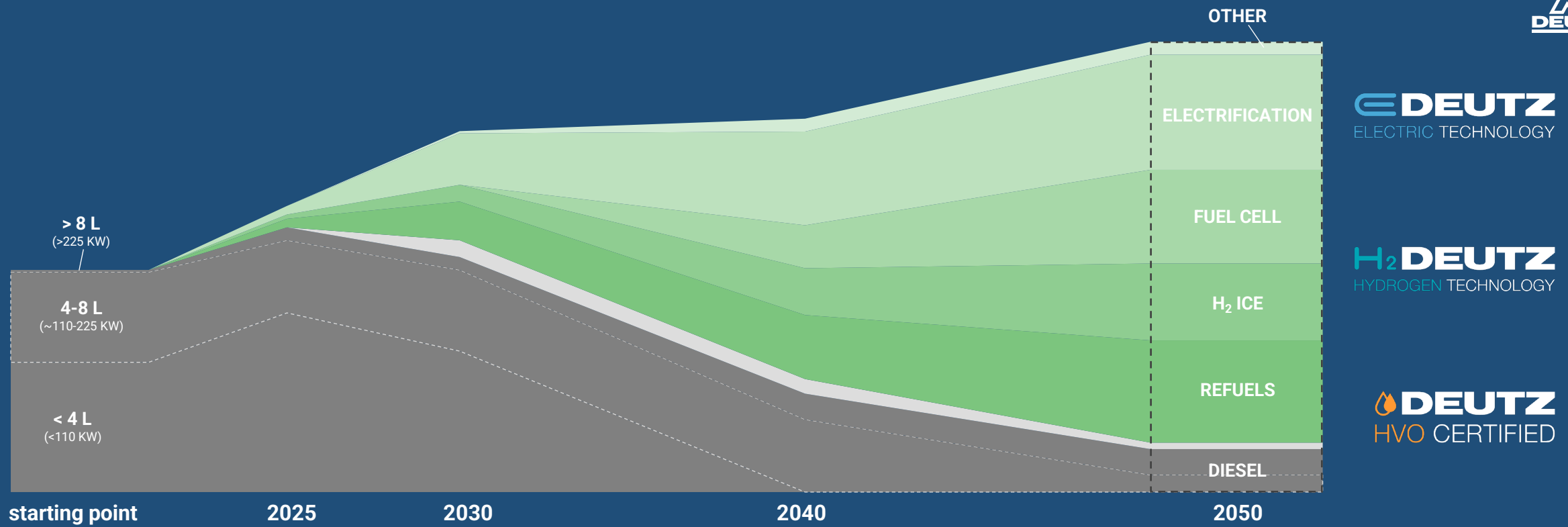


 high load factor



 **DEUTZ** low load factor

Assessment: technology allocation of DEUTZ powertrains until 2050

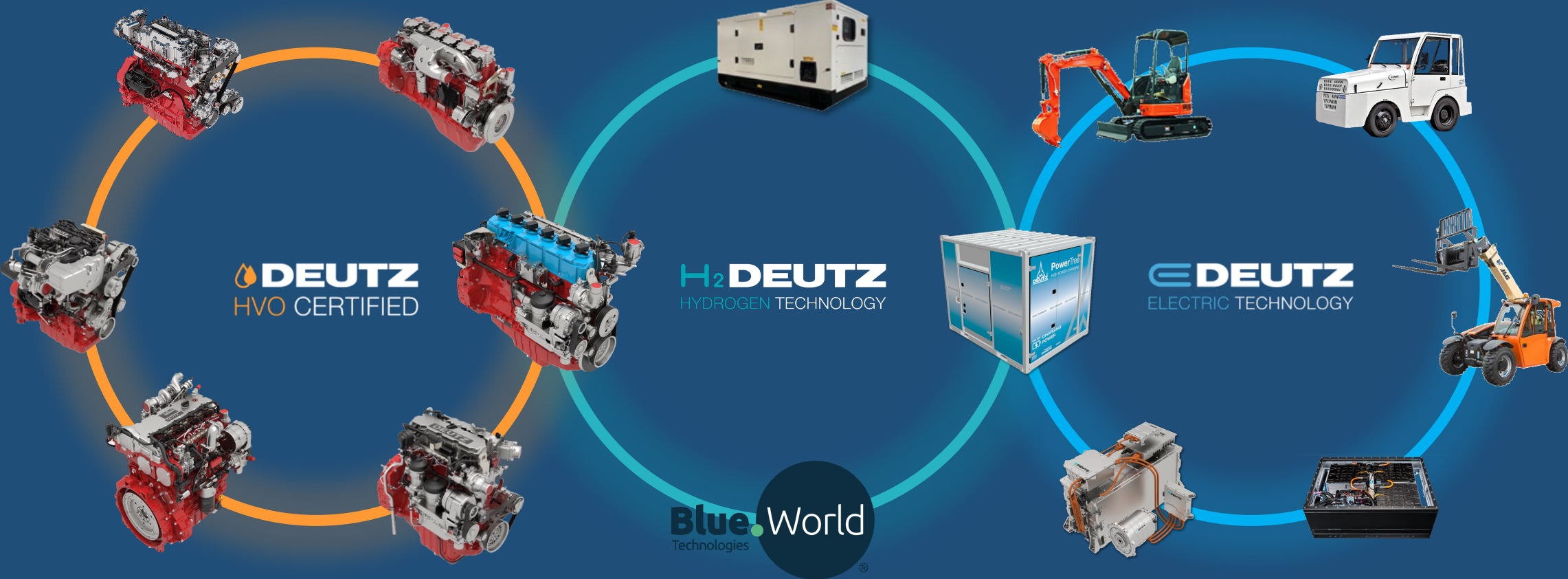


TRANSITION
IS INEVITABLE

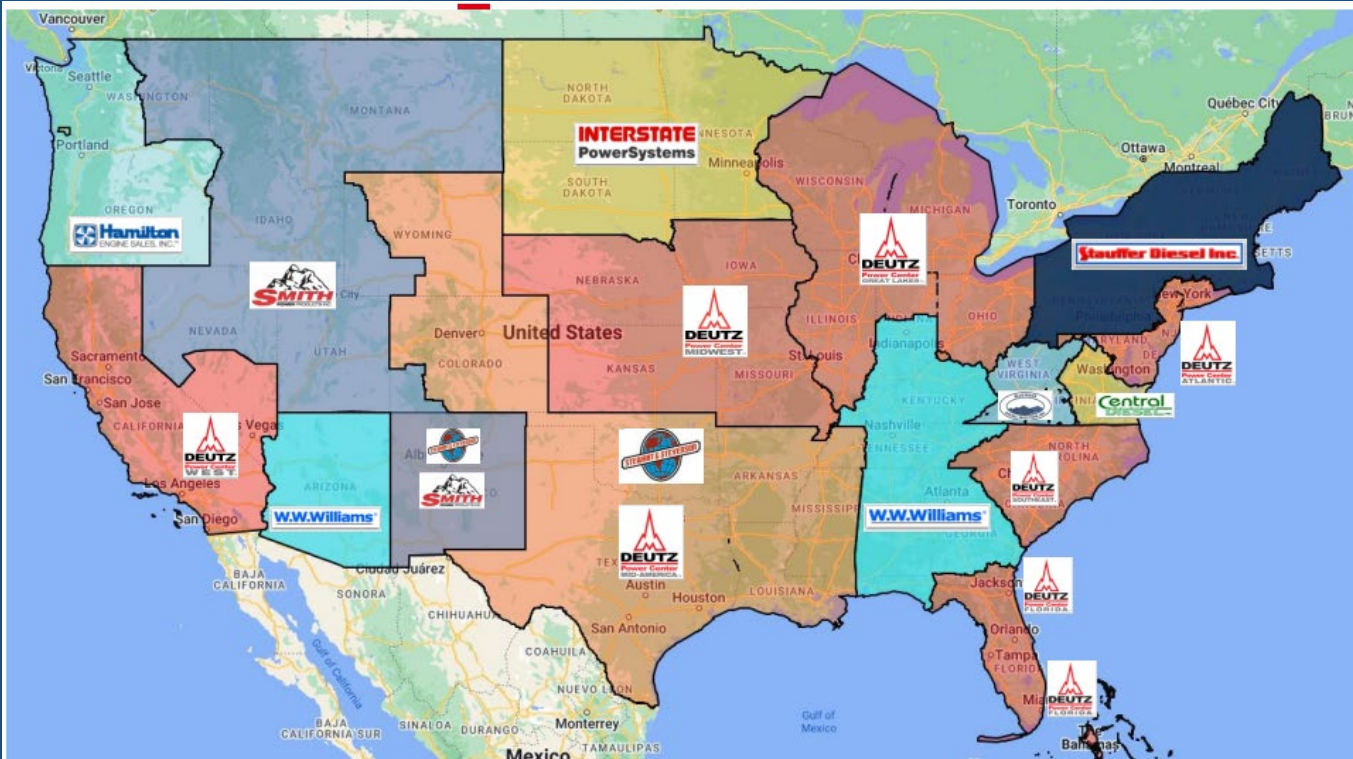


DEUTZ IS PREPARED

DEUTZ Solutions – making our product ecosystem climate-neutral



DEUTZ service in the US – we have the network to keep you moving



SERVICE

- 9th DEUTZ Power Center (DPC) opened in Howell, MI in April
- DPC Mid-America (Mansfield, TX) is a finalist for North American Distributor of the year.
- Overall network includes strong partners.





THANK YOU!

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