### John Deere

September 22, 2021





# **John Deere Organization**

#### **BUSINESS UNITS** PRODUCTION SYSTEMS **Production and Precision Ag** Corn and Soy **Small Grains** Sugar Cane Cotton **Small Ag and Turf Dairy and Livestock Turf and Compact Utility** High-value Crops Construction and Forestry Earthmoving Roadbuilding Forestry **ENABLING** BUSINESSES Intelligent Aftermarket & John Deere **Power Systems Solutions Group Customer Support** Financial

### **Product Portfolio**

John Deere produces a wide variety of products each with their own requirements and duty cycles



# Off Road: Highly Different and Harsh Conditions

Wet



Cold



**Debris** 



**Slope** 

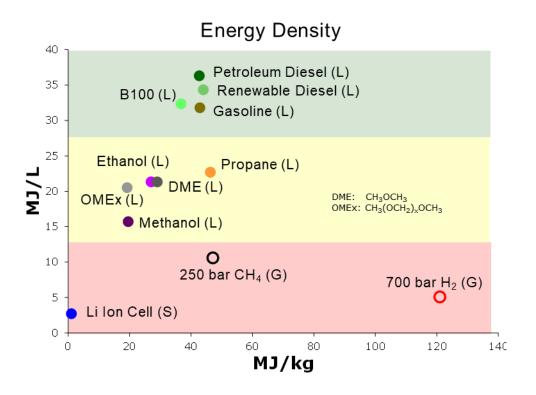


### **Differences**

Working Speed	60 (miles/hr)	5 (miles/hr)
Cooling	Ram Air	Fan Power
Intake Air	Clean	Variable
Work Surface	Pavement	Dirt
Fluid Refill	At Station	At Machine
Usage	Continuous	Seasonal
Duty Cycles	Few	Many
Transient Demand	Medium	High
Off-Level	Minor	Substantial
Vibration	Mild	Severe
Environment	Clean	Debris

Public

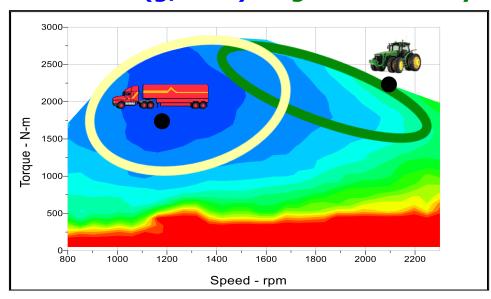
### **Hydrogen Storage Onboard**





### On-Highway Truck vs. Production Ag Applications

#### **Best BSFC(g/kWh)** High Productivity





### **Diesel Alternative Solution Comparison Today**

- 9.0L Engine: ~300kW / 35%Load / 10 hrs
- For similar weight/space constraints
- Fuel Cell System:

Installed Cost: 7.5X Diesel

Refill Freq: 10X Diesel

Fuel Cost/kWh: 4-5X Diesel





