

DAIMLER

Hybrid, Electric, and Alternative Fuel Vehicles



July 13, 2010

Advancing the Choice

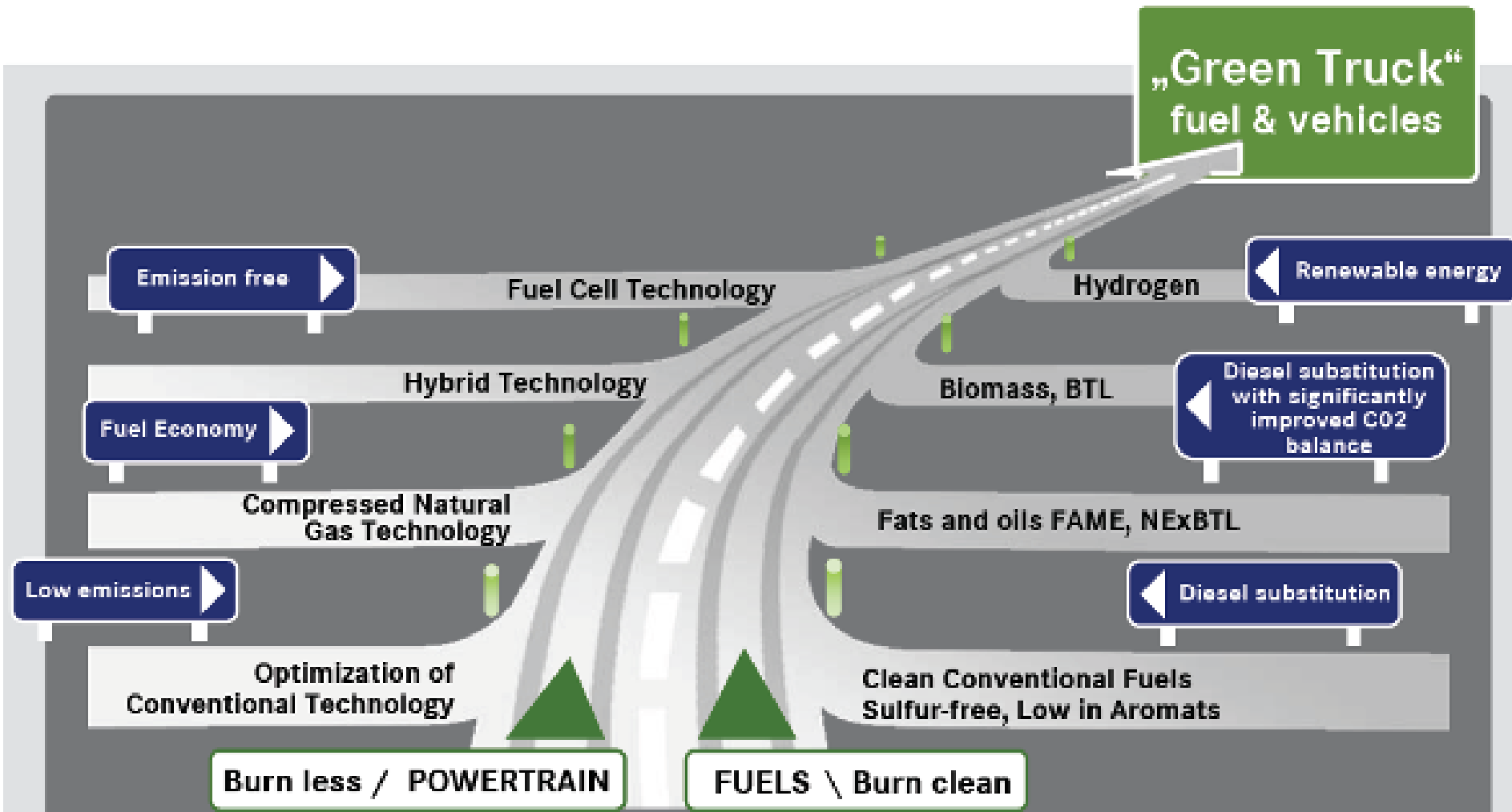
David Bryant

Manager, Vocational Sales

Freightliner Trucks

Shaping Future Transportation – CleanDrive Technologies

- >275,000 Daimler CleanDrive-equipped vehicles on the road



Why Natural Gas?

• Fuel Advantages

- Cleanest technology available
- Abundant supply in North America
- Renewable fuel
- Lower operating costs
- Broad range of applications

• Fleet/ Vehicle Benefits

- No additional emissions control devices in 2010
 - Maintenance-free 3-way catalyst
 - No DPF regeneration needed
- Less packaging
- Smart business decision

Unparalleled Performance with
the Cummins-Westport ISL-G



DTNA Natural Gas Experience

1999: ThomasBuilt CNG bus w/ John Deere engine



June 2009: Freightliner M2 112 LNG

July 2009: ThomasBuilt Bus Saf-T-Liner CNG w/ ISL-G



1996: FCCC Walk-in Vans
FCCC & TBB School Busses



Feb 2008: Sterling SB 113 LNG Tractor



Oct 2009: Freightliner M2 112 CNG



2011: FCCC w/ Cummins CNG engine



DTNA has put more than 2000 natural gas units into service!

Why Freightliner? Application & Configurations

Available Applications

- Flow (municipal)
- Refuse (municipal)
- Owner Operator (Drayage)
- P&D
- Dump (municipal)
- Gas Utilities
- Regional Haul Tractor
- Beverage



Feb 2008: Sterling SB
113 LNG Tractor



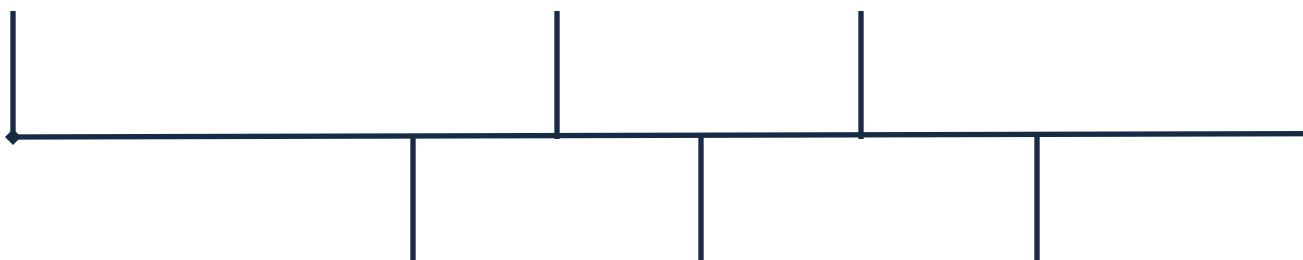
Oct 2009: Freightliner
M2 112 CNG 6X4 Tractor



Feb 2010: Freightliner
M2 112 CNG 6X4 Truck



Jul 2010: Freightliner M2
112V CNG 6X4 Truck



June 2009: Freightliner
M2 112 LNG 6X4 Tractor

Dec 2009: Freightliner
M2 112 CNG 4X2 Truck

Mar 2010: Freightliner
M2 112 CNG 4X2 Tractor

DAIMLER M2 112 NG Tractor/ Truck



Unparalleled Performance with the ISL-G

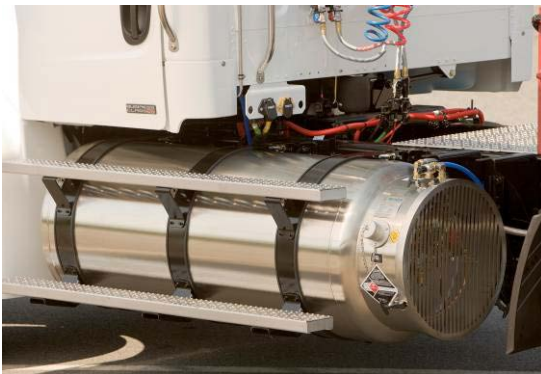


8.9 liter; 300-320 hp/ 860-1000 ft-lb

Standard M2 Advantages

- Superior maneuverability - 55° wheelcut
- Excellent visibility – 2500 sq in windshield
- Unparalleled HVAC system
- Ease of entry/ exit
- Lightweight aluminum cab
- Body builder friendliness / multiplexing
- Wide selection of options to fit your vocation

Factory Support



Factory Installed 65 & 89 DGE Stainless LNG Tanks;
and 50 (CAN), 60, and 75 Gallon CNG Tanks



Factory Installed Methane
Detection System

DAIMLER M2 106 City Delivery Hybrid



Key Specs (342-1RX)

- M2-106 straight truck, GVW up to 33K (40K upon approval)
- Cummins ISB – 200 to 325hp / 520 to 750 ft-lb
- Eaton Parallel Electric Hybrid Drive – 60hp/ 310 lb-ft peak
- Air or Hydraulic Brakes
- Day Cab, Extended Cab, and Crew Cab Configurations
- Manual PTO only



Key Specs (342-1U3)

- Same as above but compatible with APG
- 5kW/ 110V or 7kW/ 208V APG
- Charges through regenerative braking
- Limited stationary (parked) capability
- Must order PDI Center installation of APG

Performance

- Fuel Economy Improved 20%- 40%
- CO2 Output Reduced 10 to 14 Tons/ Year



Applications

- Beverage
- Delivery Trucks
- Stake Trucks
- Refuse (not residential)
- Non Front-Line Emergency
- Library Truck
- Service Trucks
- Dump
- Landscape
- Tanker



Key Specs (342-1R4)

- M2-106 straight truck
- GVW – up to 40K, special approvals up to 54K
- Cummins ISB – 200 to 325hp / 520 to 750 ft-lb
- Eaton Parallel Electric Hybrid Drive – 60hp/ 310 lb-ft peak
- 6 speed Ultrashift transmission
- Air or Hydraulic Brakes



Key Specs (342-1U2)

- Same as above but compatible with APG
- 5kW/ 110V or 7kW/ 208V APG
- Charges through regenerative braking or diesel engine
- Extended stationary (parked) capability
- Must order PDI Center installation of APG



Performance (dependent on stationary PTO usage)

- Fuel Economy Improved 40%- 60%
- Idle Time Reduced 4 to 5 Hours per Day
- CO2 Output Reduced 13 to 17 Tons/ Year



Key Specs (342-1T3, EH-8E306-T)

- M2-106 tractor (4x2)
- **GCW – 55K** (diminishing loads such as beverage)
- Cummins ISB – 280hp to 325 hp / 660 ft-lb to 750 ft-lb
- Eaton Parallel Electric Hybrid Drive – 60hp/ 310 lb-ft peak
- 6 speed Ultrashift transmission

Performance

- **Fuel Economy Improved 15%- 30%**
- CO2 Output Reduced 12 to 19 Tons/ Year



Key Specs (342-1T5, EH-8E306-P)

- M2-106 shuttle, GVW up to 33K (special approval to 40K)
- Cummins ISB – 200 to 325hp / 520 to 660 ft-lb
- Eaton Parallel Electric Hybrid Drive – 60hp/ 310 lb-ft peak
- 6 speed Ultrashift transmission
- Air or hydraulic brakes

Performance

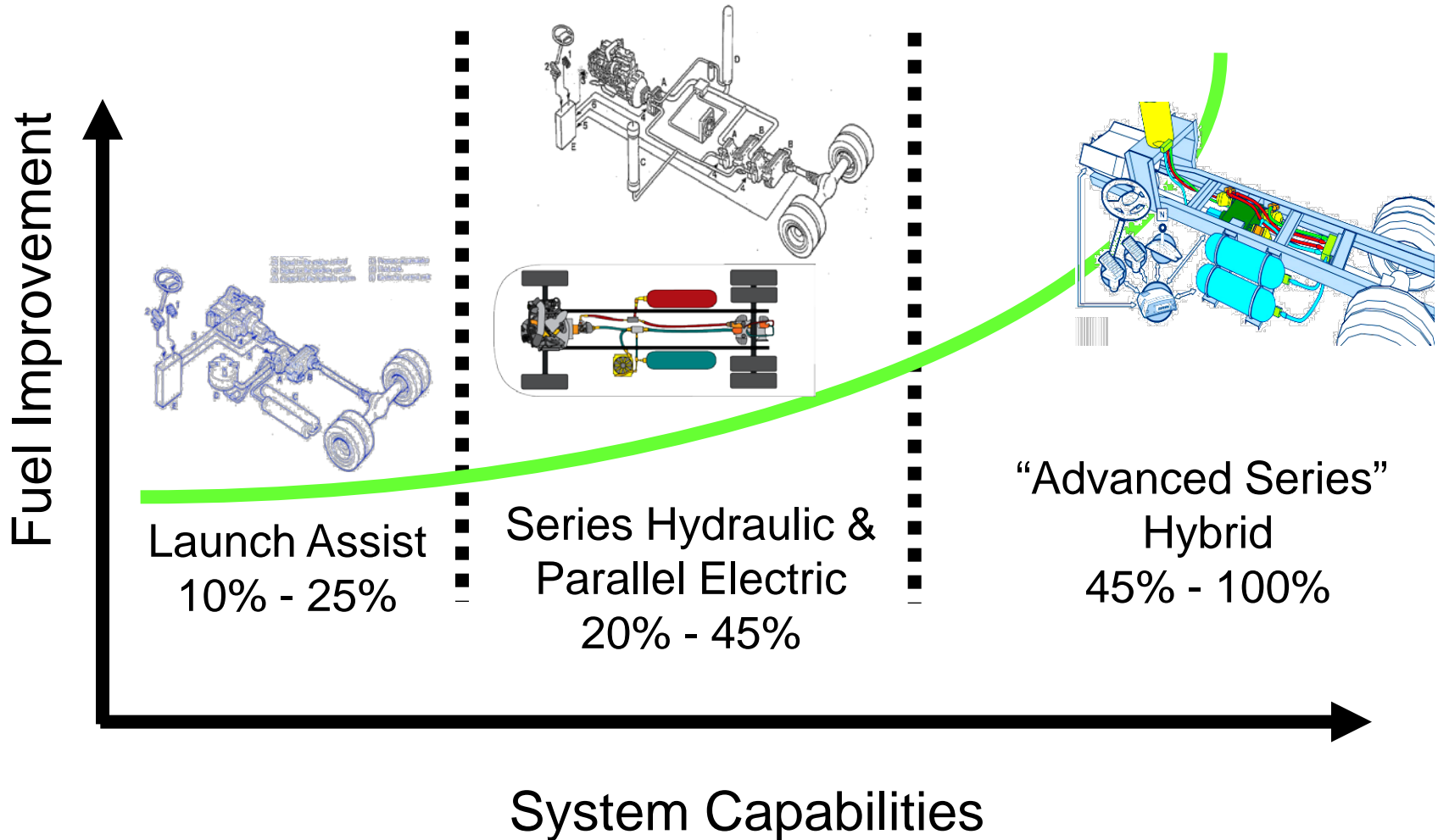
- **Fuel Economy Improved 20%- 40%**
- Brake Life Increased 2 to 3x
- CO2 Output Reduced 10 to 14 Tons/ Year



- Operation:
 - Engine will shut off when vehicle comes to a stop
 - Engine will remain off while service brake is engaged
 - Engine will restart when service brake is released and transmission will automatically shift back into drive gear.
 - Hill Start Aid system will hold vehicle while engine is restarting and transmission is selecting a gear.
- Benefits:
 - 8%- 9% Additional Improved Fuel Economy
 - Reduced Emissions
 - No Roll-Back



Fuel Economy Improvement Relative to Technology



DAIMLER MT45 Plug-In Electric Chassis

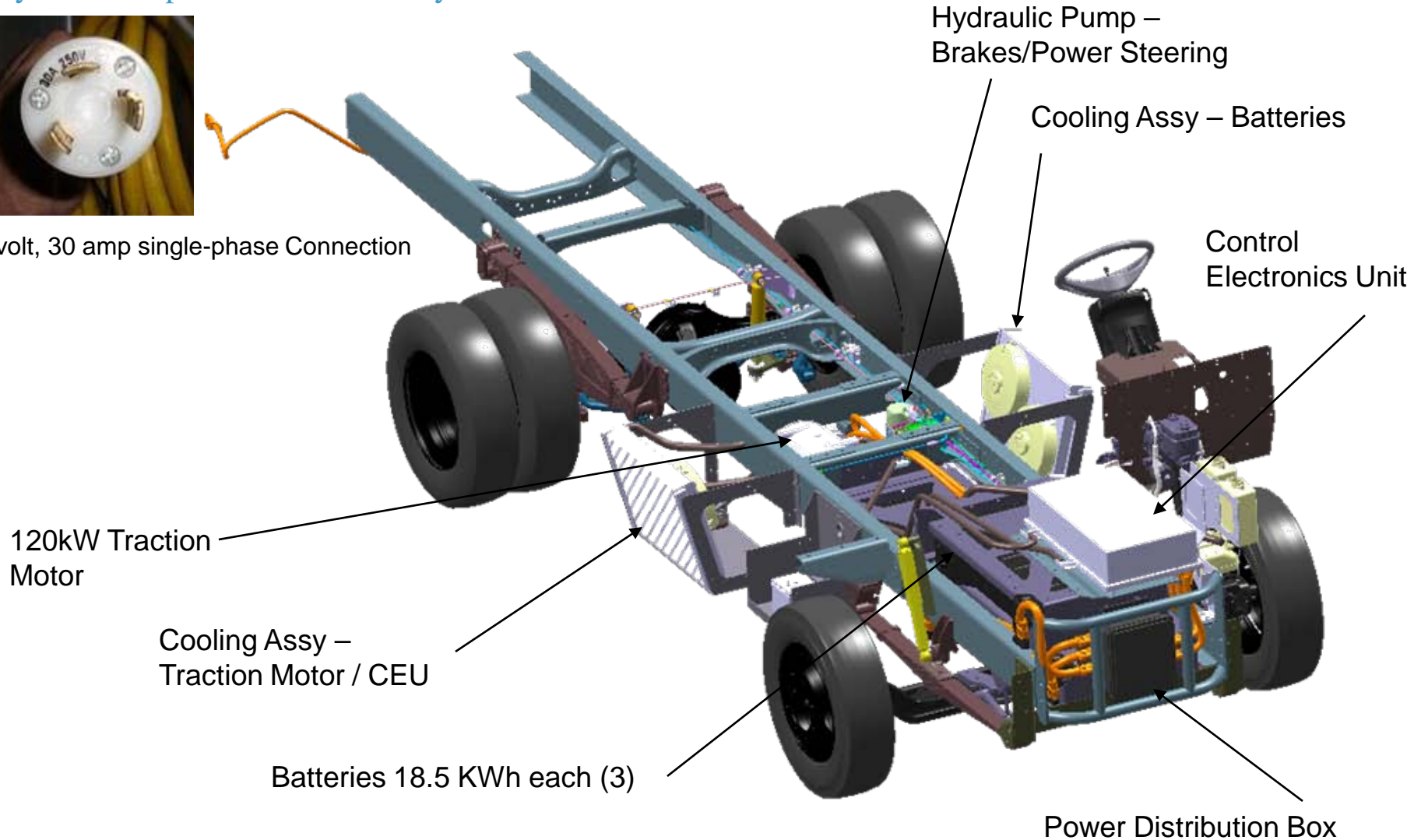


FCCC Electric Vehicle Primary Drive

System Components- Chassis Layout



220 volt, 30 amp single-phase Connection



DAIMLER



FREIGHTLINER
HYBRID
TECHNOLOGY



FREIGHTLINER
NATURAL GAS
TECHNOLOGY

