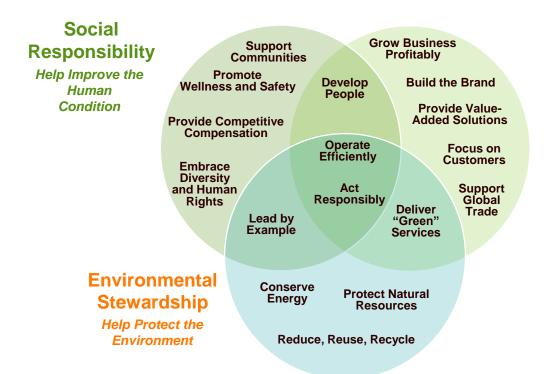


## The Future of Reduced Emissions: It's a Collaborative Public Private Partnership Axel Carrion, Director, State Public Affairs

April 12, 2018



# UPS's Global Sustainability Strategy



**Economic Prosperity** 

Help Strengthen the Enterprise

## Global Alternative Fuel & Advanced Technology Vehicles

## Total Vehicles (U.S. & International): 9,094

#### **Hybrid Electric: 695**

- 683 Package Cars (US)
- 12 Package Cars (International)

#### Electric: 312

- 122 Package Cars (US)
- 172 Package Cars (International)
- 18 Electric Bikes (International)

#### **Propane: 2,303**

- 1,176 Package Cars, Shifters (US)
- 1,127 Package Cars, Shifters (International)

#### Biomethane: 19

19 Tractors (International)

#### **Compressed Natural Gas: 3,868**

- 3,775 Package Cars, Shifters, Tractors (US)
- 93 Package Cars (International)

#### **Liquid Natural Gas: 1,328**

1,328 Tractors (US)

#### Ethanol: 80

80 Package Cars (International)

### Composite Diesel: 398

398 Package Cars (US)

### Hydraulic Hybrid: 91

91 Package Cars (US)



### UPS Rolling Laboratory at a Glance

Alternative Fuel and Advanced Technology Fleet



OPERATING SITUATION

#### Suburban

ALTERNATIVE FUEL: CNG & HYBRID (ELECTRIC & HYDRAULIC)

#### Range: 100 MILES AVERAGE

We're locating natural gas compressors, storage tanks, and fueling stations at large, suburban facilities to support CNG package cars.



OPERATING SITUATION

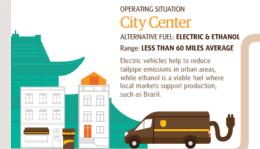
Regional (UPS HUB TO UPS HUB)

ALTERNATIVE FUEL: LNG, CNG & BIOMETHANE (RNG)

Range: 400-600 MILES AVERAGE LONG-HAUL

Our LNG investments include refueling infrastructure corridors in the U.S. to service our growing natural gas fleet.





OPERATING SITUATION

RUTAL

ALITERNATIVE FUEL: PROPANE

Range: 100+ MILES

Propane provides a cost-effective fueling solution in locations with package cars that drive 100+ miles per day.



## **Business Case Considerations**

- Diesel/gasoline/alternative fuel price spread
- Incremental cost of the alternative fuel truck
- Fueling infrastructure
- Shop modifications
- Preferential parking (no parking tickets) or urban access
- Incentives
- Maintenance
- Required internal rate of return







www.sustainability.ups.com

