



# Zero Emissions Trucks and the Low Carbon Future

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# Ryder is investing in “customer-facing” technology to address disruption and digitization across its entire business

## Key Strategic Investment Highlights

Fleet owners one-stop shop for fleet maintenance services. Simplifies truck history, schedules maintenance in 60 seconds or less; finds fuel locations, logs fuel receipts, quick access to roadside assistance, rental vehicles, and more



**RyderGyde**

RyderView Last Mile tracking solution includes consumer self-service scheduling and provides 100% real-time, end-to-end shipment visibility and tracking for shippers and consumers on last mile deliveries



**RyderView**

Single, collaborative, digital platform for real-time visibility to all goods moving in and out of the supply chain. Empowers decision making and drive efficiencies



**RyderShare**

One-stop shop for API's enabling connected 3<sup>rd</sup> party telematics data and accelerating the development of a suite of visibility and maintenance services



**RyderConnect**

Peer-to-peer commercial truck sharing platform that makes it easy for businesses to share trucks with each other and monetize idle assets



**COOP™**

Advanced Vehicle Technology investments including: autonomous vehicle pilots and partnerships to validate service as well as electric vehicles for final mile, urban delivery and more



**Electric Vehicles & Autonomous Vehicles**

Revolutionary approach to selling used vehicles using new digital capabilities. E-Commerce platform site similar to “Carvana” of Used passenger cars



**Used Vehicle Sales E-Commerce Online Store**



**Smart Warehouse**

Multiple smart warehousing technology including autonomous robots, drones, sensors & IDs, wearables and more being tested and deployed across multiple warehouses



# Alternative Power Experience

- **Natural Gas – CNG & LNG**

- 15L Westport HPDI
- GM 6.0L
- 6.7L ISB-G
- 8.9L ISL-G
- 11.9L ISX-G

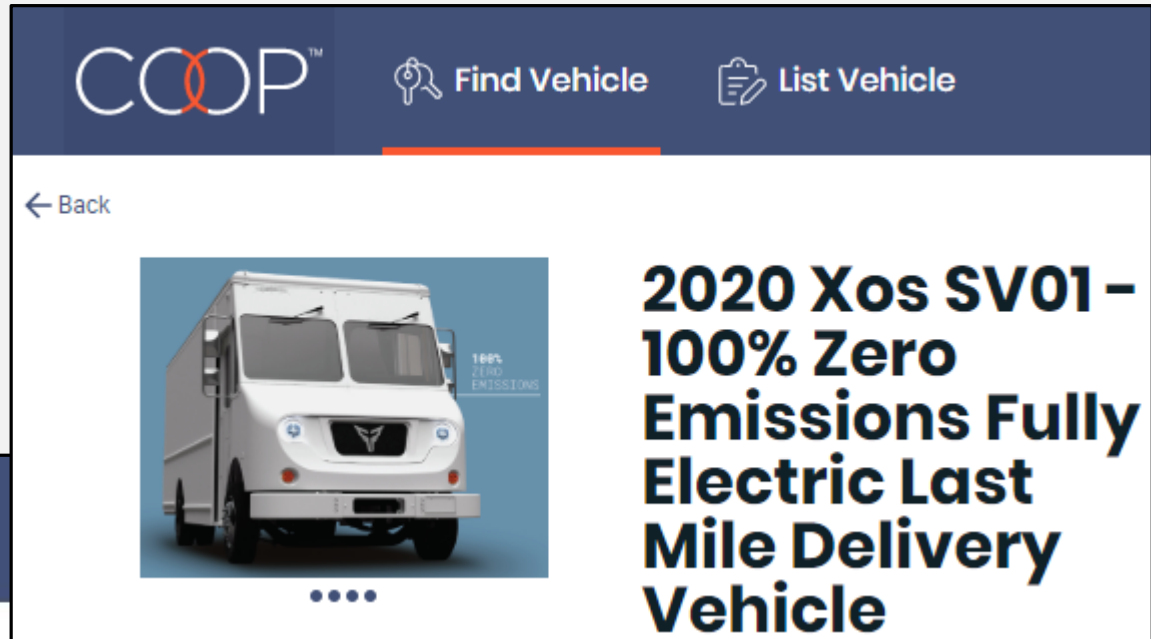


- **Electric / Hybrid**

- Freightliner eM2
- Freightliner eCascadia
- Workhorse E-Gen
- Workhorse C-1000
- Chanje V8070




# COOP.com - New Tech Demo Platform

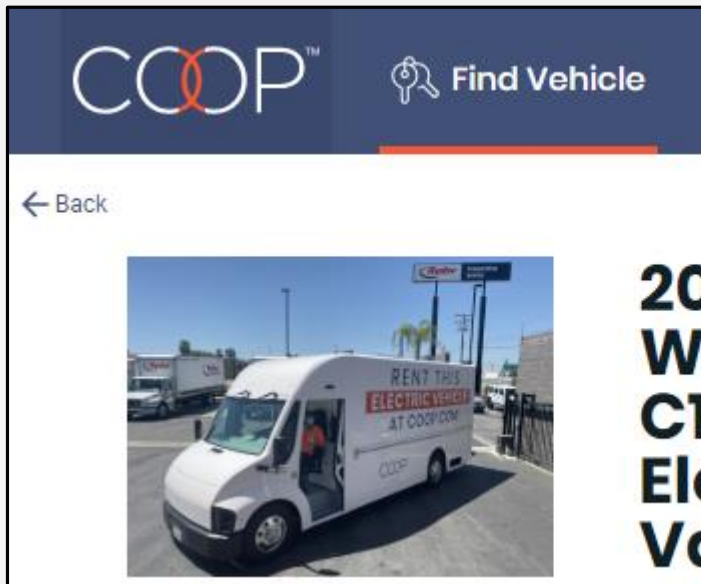


COOP™ Find Vehicle List Vehicle

← Back




**2020 Xos SV01 – 100% Zero Emissions Fully Electric Last Mile Delivery Vehicle**



COOP™ Find Vehicle

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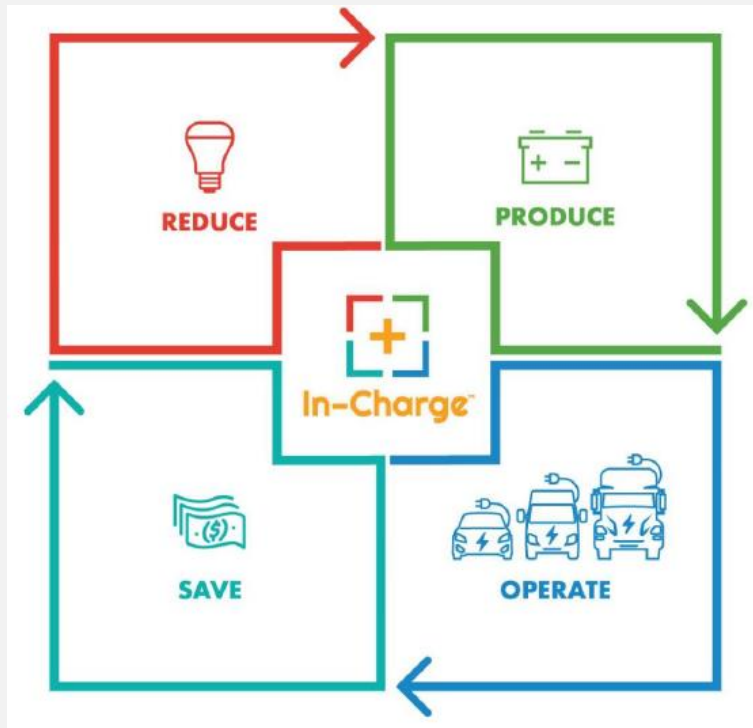


**2020 Workhorse C1000 – 100% Electric Step Van**

# ABB & In-Charge Energy Partnership

## End-to-End Commercial EV Infrastructure

- Strategic partnership to enable EV adoption
- Management of EVs will be very different from ICE
- Software & hardware deployment



### Reduce

Reduce building energy load through implementation of energy conservation measures (ECM's)

### Produce

Design, Engineer, Build EV charging and behind-the-meter infrastructure. Harness all available federal, state, local tax/unit incentives, grants.

### Operate

Provide ongoing Maintenance, Certification, Software Integration and Energy Management

### Save

Minimize installation costs, optimize energy use, eliminate demand charges, reduce operating expense



# In-Charge Installations

## Fontana, CA

150kW ABB Terra184

200 AMPS



## Northridge, CA

50kW ABB Terra54

125 AMPS



# Site & Fleet Management Tools

