Company History

- CHARLATTE builds its first electric vehicle in 1984
- In 1993 CHARLATTE America incorporated
- In 1999 CHARLATTE acquired by FAYAT Group

Fayat Group is family owned in Bordeaux, France. Comprised of 208+ companies with an annual revenue of over €4.5B.
Company History

- #1 Manufacturer of Electric Tractors and Beltloaders
- More than 25,000 electric vehicles worldwide
Evolution of Electric

- DC Traction Solid State SCR Controller
- DC Traction PowerpaK Controller
- AC Traction Power Curtis Controller
- AC Traction AC Steering Curtis Controllers PCBs

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Evolution of Electric

Battery Types
- Flooded Lead Acid
- Gel Cell
- Absorbed Glass Mat (AGM)
- Lithium Ion

Charging Methods
- Standard Overnight/Trickle
- Semi-Fast
- Fast/Rapid
Major Airlines With Concrete Plans

- Alaska Airlines
- Amazon Air
- Delta Airlines
- FedEx
- United Airlines
- European Market – Surge in Electric Vehicles started here – Airlines as well as Ground Handlers historically purchase 2X vehicles due to overnight charging vs. fast charging
- PAC-RIM – Emerging Market with most opportunity
Airports – Commitment Alternative Fuel

- SFO
- LAX
- PHX
- LAS
- JFK
- BOS
Manufacturer’s POV

PLUG N PLAY
Choose Your Energy Source
Manufacturer’s POV

Obstacles
• Infrastructure Costs
  • Still Requires Upfront Costs
• Unfamiliar Technology – Acceptance

Advantages
• Virtually any type Electric Vehicle can use Hydrogen
  • Proven Technology – Well Accepted
  • Easier to Maintain, Easier to Troubleshoot, Clean
  • TCO is Highly Advantageous
• Faster Energy Replacement
  • Electric Power Limited by Recharge Times
• New Personnel – Open to Change/Adopting New Technology
  • Younger Generation Embracing Alternative Fuels
Questions?