

# Zero Emission Drayage Truck Demonstration TransPower



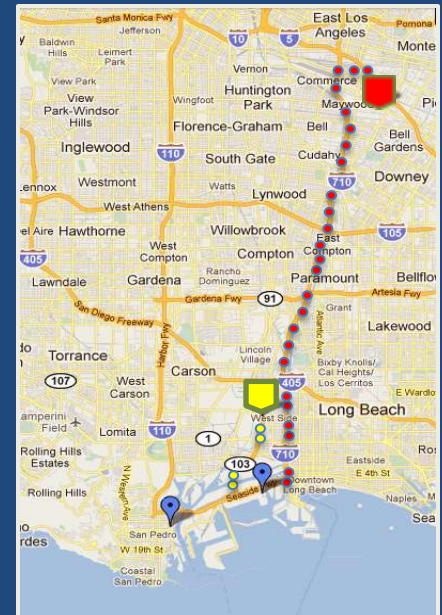
January 29, 2015  
Clean Fuels Advisory Group Meeting



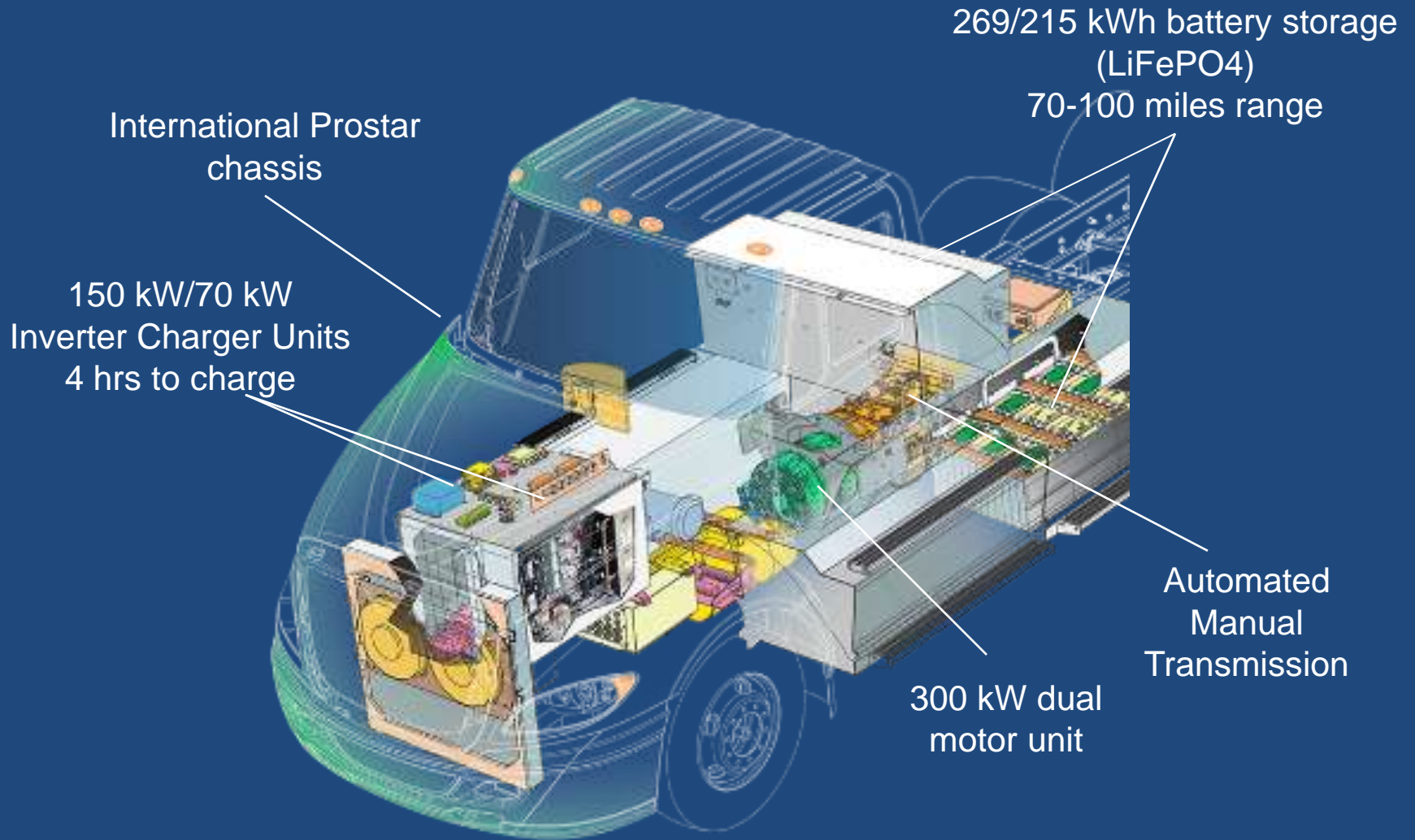
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# Background

- In October 2012, the Board recognized \$4.17M DOE grant
  - Develop and demonstrate zero-emission drayage trucks in real world operations
  - Four EV integrators awarded
  - \$1.14M for TransPower (four BETs)
- TransPower received additional funding from CEC, SCAQMD and TAP for three more trucks (seven total)



# Technology Overview



# Project Status

## EDD-1 & EDD-2

- EDD-1
  - Completed in 4/14
  - Deployed with SA Recycling in 10/14
  - Over 4,000 miles accumulated
- EDD-2
  - Chassis dyno testing at UCR
    - Drayage Truck Port Cycle
    - 2.14 - 2.3 kWh/mile efficiency (72,000 lbs GCWR)
    - 6% grade simulation
  - Deployed with TTSI in 1/15



# Project Status

## EDD-3 & EDD-4

- EDD-3
  - Completed in 12/14
  - Undergoing test drive
  - To be deployed by 3/15
- EDD-4
  - Vehicle integration completed and currently in commissioning process
  - To be deployed by 3/15
  - Recurring labor hours for truck assembly decreased from 4,200 hrs to 773 hrs
- EDD-5 thru EDD-7 to be completed by 6/15





# EDD-2

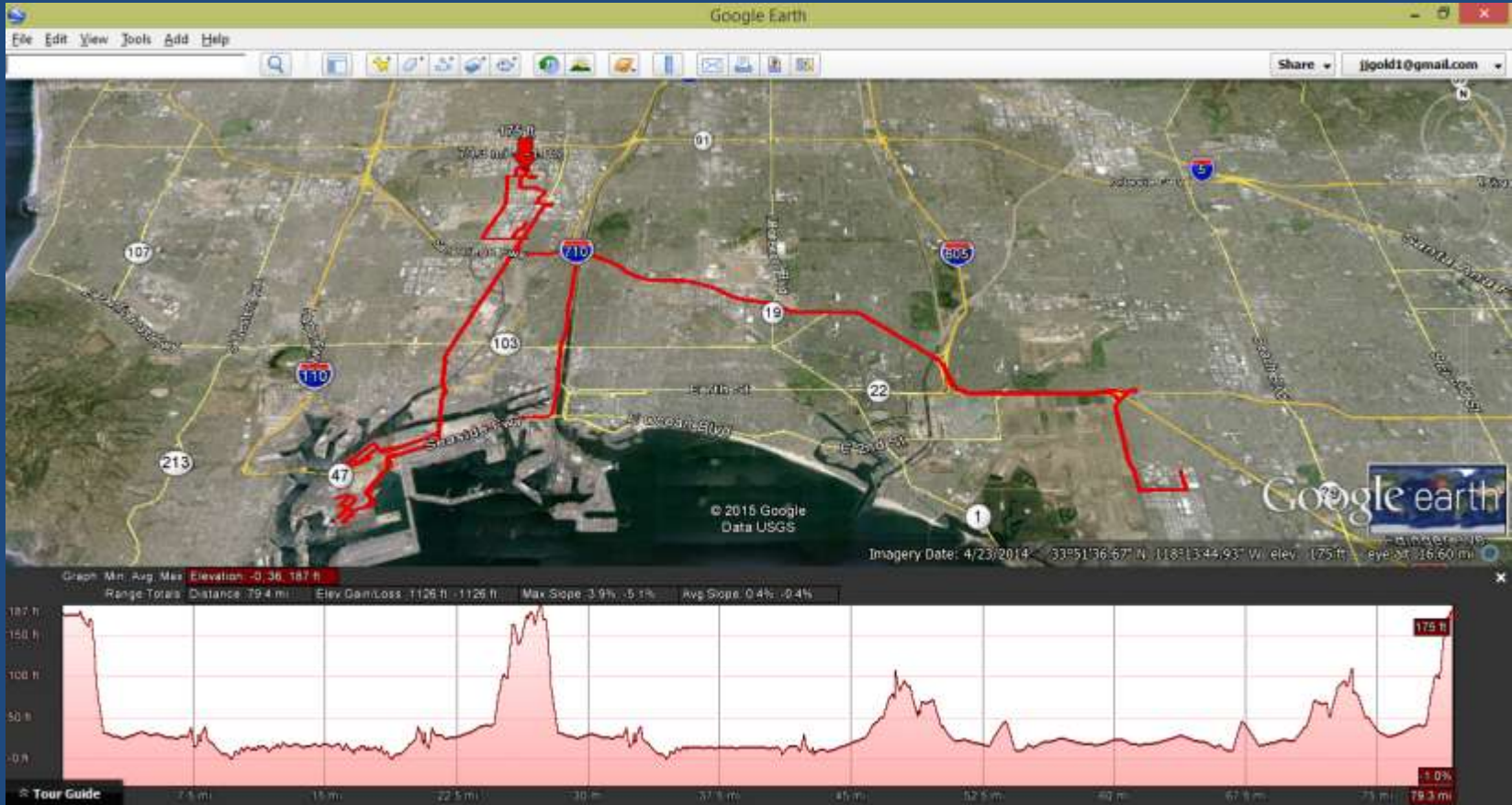
## First Drayage Service at TTSI



Date	Miles Driven	Efficiency kWh/Mile	Total Operation Time	Net Total kWh Driving	% SOC used	Net Regen kWh Recouped	Regen Recov %	Estimated Max GCRW (lbs)	AVG Speed MPH
22.01.2015	13.55	1.65	1H 10M	-22.37	10	6.41	28	22000	20.7
23.01.2015	65.49	1.90	5H 37M	-124.23	58	28.45	23	52000	25.6

# EDD-2

## More Local Service



date	Miles Driven	Efficiency kWh/Mile	Total Operation Time	Net Total kWh Driving	% SOC used	Net Regen kWh Recouped	Regen Recov %	Estimated Max GCRW (lbs)	AVG Speed MPH
26.01.2015	80	2.04	6H 26M	165	77	32.9	20	40,000	20.7

# Crossover Applications

- Yard Tractors
- Catenary trucks
- Fuel Cell Range Extenders
- School Buses

