

Advanced Transportation Technologies: Redefining Transit, Adding Options

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Steve Marshall, Executive Director

Center for Advanced Transportation & Energy Solutions

marshallsj@comcast.net

The Future of Transportation

- Vehicles will be oil free, interconnected, and ultimately self-driving
- ACES (Automated, Connected, Electric, Shared)
- Public transportation will be redefined

GM/Lyft's Self Driving Electric Taxis



Factors That Will Accelerate ACES

- Moore's Law is in the "Second Half of the Chess Board"
- Major Automakers are in Full Competitive Mode
- The Tort Liability System will Demand Collision Avoidance Systems
- Public policy benefits in reduced accidents, emissions and congestion

“The Second Machine Age”

by Erik Brynjolfsson and Andrew McAfee

“Constant doubling, reflecting exponential growth, is deceptive because it is initially unremarkable.

As we move into the second half of the chessboard, exponential growth confounds our intuition and expectations.

It accelerates far past linear growth, yielding Everest-sized piles of rice and computers that can accomplish previously impossible tasks.”

Electric and Autonomous



Horizontal Elevators





Proterra bus

**Clean
machine**

Charge station

**50
miles**

The bus's maximum distance on a full charge, enough for a typical downtown business or tourist loop

The bus can carry up to 80 passengers; a battery pack is built into the vehicle's underbody

**10
minutes**

Time it takes to fully charge a vehicle via a station that connects to the bus's roof at one of its regular stops



PROTERRA CATALYST™

NOT IN SERVICE

BATTERY ELECTRIC

ZERO EMISSIONS





metropool

ALL ELECTRIC | ZERO EMISSION

at City Station

High County Water VANPOOL





Reducing Peak Congestion with More Frequent, Flexible Tailored Transit Options

- Bring the Commute Trip Reduction Act up to date to encourage flexible van pools, carpools, and company transit
- Create a system of connected, high-tech mobility hubs, financed in part with private sector investments and connected with Apps
- Establish a series of federally funded demonstration/pilot projects for self-driving shuttles and taxis, working with Uber, Lyft, GM, Google, Tesla, BMW and others