Overview of Autonomous Vehicles’ Potential to Reduce GHG Emissions

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Presentation to DEEP, 13 February 2020
Autonomous
SHARED MOBILITY SERVICE MODELS

Core & Incumbent Services
- Car Rental
- Liveries/Limos
- Paratransit
- Pedicabs
- Public Transit
- Shuttles
- Taxis

Innovative Services
- Bike sharing
- Car sharing
- Courier Network Services
- e-Hail
- High-Tech Company Shuttles
- Microtransit
- P2P Bikesharing
- P2P Vehicle Sharing
- Ridesourcing/TNCs
- Scooter Sharing

Carpool
Vanpool
Casual Carpool
3 Revolutions Future Mobility Program
THREE REVOLUTIONS
STEERING AUTOMATED, SHARED, AND ELECTRIC VEHICLES TO A BETTER FUTURE
DANIEL SPERLING

Foster innovations to take advantage of windows of opportunity
Internal and external forces pressure the existing system, which can realign around maturing innovations

- **Niche-innovations**
  - New technologies, business models, behaviors

- **Existing sociotechnical systems**
  - Industry, culture, policy, science, user preference, technology

- **Sociotechnical landscape**
  - Broader political, economic, demographic trends

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<th>Phase 1</th>
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- **Entry and exit of new innovations, trial and error**
- **Learning, improvement, support**

**Window of opportunity**
Niche-innovation gains internal momentum and takes advantage of window of opportunity, triggering adjustments in existing system

**Landscape developments**
Put pressure on existing systems, creating window of opportunity for niche innovations
< 1% of total fleet in CT
Connecticut Energy Consumption Estimates, 2017

Source: Energy Information Administration, State Energy Data System
Connecticut is lagging other states in renewable energy production.
BUILDING A LOW CARBON FUTURE FOR CONNECTICUT

ACHIEVING A 45% GHG REDUCTION BY 2030

REDUCE GREENHOUSE GAS EMISSIONS 45% BELOW 2001 LEVELS BY 2030, ENSURING A CLEAR PATHWAY TO ACHIEVE THE 2050 TARGET

CLEAN, EFFICIENT, & RESILIENT BUILDINGS

2014 Sector Emissions

Buildings Sector

2016
2020
2030

34%

40%

20%

20%

10%

5%

20%

60%

20%

ZERO CARBON ELECTRICITY GENERATION

2014 Sector Emissions

Electricity Sector

2016
2020
2030

71%

60%

20%

10%

Recommendations from the Governor’s Council on Climate Change

DECEMBER 18, 2018
There were 1,352,381 registered automobiles in Connecticut in 2016, which is 0.38 vehicles per capita.