Accelerating Clean, Electrified Transportation in the U.S.

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Our Climate has a Transportation Problem

Battery prices are declining FASTER than predicted... year after year.
2035 2.0 Report
Research Question:

Given recent rapid declines in battery costs, what are the impacts of rapid transportation sector electrification on:

- consumers,
- emissions
- public health
- electric power infrastructure, &
- employment?

www.2035report.com/transportation/
Two Comparative Scenarios

**DRIVE CLEAN Scenario:**
- 100% electric sales of new passenger cars and trucks by 2030
- 100% electric sales of new medium- and heavy-duty vehicles by 2035
- 90% clean electricity grid by 2035

**NO NEW POLICY Scenario (BAU)**
No New Policy Scenario

Light Duty Vehicle Stock (BAU)

Heavy Duty Truck Stock (BAU)
EVs as a Percentage of Sales: DRIVE CLEAN vs. No NEW POLICY Scenarios
Consumers Savings & Jobs

- Consumers save ~$2.7 trillion between 2020 and 2050
  
  - This translates to average household savings of $1,000/year for 30 years

- Accelerating EV Sales and grid decarbonization yields 2 Million net jobs in 2035
Ground transportation greenhouse gas emissions fall:
- 60% by 2035
- 93% by 2050

Ground transportation pollution-related premature deaths fall:
- 56% by 2035
- 96% by 2050
- 150,000 total deaths avoided by 2050
Grid Impacts are Modest

- A 90% clean grid can handle the additional demand due to electrification.

- ~120 GW/year of wind, solar, & storage capacity additions are needed.

- Wholesale electricity costs and distribution costs on a per kWh basis do not increase from today’s levels.

- Since total electricity sales increase, average distribution costs do not increase.
Rapid investments in public charging infrastructure (+ grid upgrades) are needed

- ~$11 billion/year through 2050

Historical distribution grid investments are ~$30 billion/year
What Policies Are Needed to Achieve the 2035 2.0 DRIVE CLEAN Scenario?

Companion Policy Report available at:

www.2035report.com/transportation/
50+ Policy Actions, Across 7 Core Categories

- National & State Vehicle Standards
- Targeted Incentives
- Strategic Charging Infrastructure
- Domestic Manufacturing
- Smart Rate Design
- EV-Friendly Codes & Procedures
- Equity & Environmental Justice

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<tr>
<th>Policy Actions &amp; Timeline for Enactment</th>
<th>Federal Action</th>
<th>State Action</th>
<th>Local Utility Action</th>
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<td><strong>Near-Term (2021-2023)</strong></td>
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<td>Adopt federal GHG Emissions Standards reaching 0g/mile by 2030/2035</td>
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<td>Adopt increasingly rigorous Federal Fuel Economy (CAFE) Standards</td>
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<td>Adopt state 100% ZEV Sales Standards</td>
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<td><strong>Mid-Term (2024-2026)</strong></td>
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<td>Reform and expand Federal Plug-In EV Consumer Tax Credit</td>
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<td>Provide incentives for public and private fleet conversion</td>
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<td>Provide used EV incentive</td>
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<td>Offer competitive grants and funding programs for public and non-profit entities</td>
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<td>Require EV procurement for public fleets, transit, buses</td>
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<td>Offer federal/state tax exemption or reduction</td>
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<td>Adopt special lane access for EVs, parking incentives, road toll fee waivers, and licensing incentives</td>
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<td>Support new financing models and innovative funding programs that significantly expand consumer and business access</td>
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Bipartisan Infrastructure Plan Spends Billions on Roads, Bridges, EVs

Fixes to the crumbling road system are a major part of legislation currently being haggled over in Congress.

BY SEBASTIAN BLANCO   JUN 26, 2021

Biden sets goal for 50% of new US vehicles to be electric by 2030

President outlines plan to tackle the climate crisis by cutting emissions and tightening pollution standards for cars and trucks
Thank you!

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www.energyinnovation.org