Evaluation of Alternative Funding Strategies for Missouri

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Increasing Fuel Efficiency — Decreasing Fuel Tax Receipts

- Fuel economy is up and hybrid purchases are increasing.
- By 2040, most new vehicles will be hybrid/electric.
- Current registration fee revenues will decrease.

<table>
<thead>
<tr>
<th>Vehicle Type (Built after 1980)</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid</td>
<td>50,671</td>
</tr>
<tr>
<td>Plug-in Hybrid</td>
<td>2,197</td>
</tr>
<tr>
<td>Electric</td>
<td>1,707</td>
</tr>
<tr>
<td>Other Alternative Fuel</td>
<td>46</td>
</tr>
<tr>
<td>Flex-fuel (Ethanol)</td>
<td>416,857</td>
</tr>
<tr>
<td>Total Light-duty Vehicles</td>
<td>4,536,156</td>
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</tbody>
</table>
Statewide Private Fleet Light Duty Vehicles (Average MPG, 2016)
Statewide MPG Distribution, By Vehicle, 1985 – 2015
Revenues Decline Expected to Continue with Hybrid Vehicle Use

- **Current Revenues Estimates Per Driver**
  - Average Driver ≈ $360/year
  - Hybrid ≈ $235/year
  - Electric ≈ $105/year
  - Losses in 2017 alone are nearly $7 million

- **Future Revenue Options**
  - Expand special fuels decal
  - Change to MPG as a structure
  - More efficient revenue collection and technology
Relationship between Taxable HP and MPG, 2016

![Graph showing the relationship between taxable horsepower and average combined MPG for the year 2016. The x-axis represents taxable horsepower ranging from 0 to 140, while the y-axis represents average combined MPG ranging from 0 to 120. The data points form a scattered pattern, indicating a general trend of lower MPG as taxable horsepower increases.]
MPG of All Registered Vehicles, June 2017

[Map showing average MPG across Missouri with color coding for different MPG ranges]
Revenue Forecast with Existing Motor Fuels and Registration Fees

- Gasoline Tax
- HP Registration Fee
- MPG Registration Fee

Millions

- 2010
- 2015
- 2020
- 2025
- 2030
- 2035
- 2040
Missouri Department of Transportation

Jefferson City, MO