Trucking Emissions Progress To Protect the Environment

- Today’s clean diesel technologies have **reduced pollutants by 99%** since 1988, including particulate matter and nitrogen oxide (NOₓ).
- **60 trucks** on the road today equal the same emissions as one truck on the road from 1988.
- Since model year 2014, trucks have **cut CO₂ emissions by 1.37 billion tons**, reducing oil consumption by 2.5 billion barrels by 2027.

Emission Reduction Solutions

- American Transportation Research institute (ATRI) research found renewable diesel as an effective alternative pathway to decarbonization. Switching a petroleum diesel truck to a renewable diesel truck would **decrease CO₂ emissions by an average of 67.3%**.
- Renewable diesel uses the same infrastructure, has fewer performance issues, and is more cost competitive to diesel.
- Flex-fuel hybrid technologies provide a way for such trucks to gain early entry into the marketplace by overcoming limited range, cost, and battery-weight concerns.
- **43% of the trucks in our nation’s fleet are pre-2010 models.** 2010 marked a milestone in truck engine technology with the standardization of selective catalytic reduction and diesel particulate filters.
- The cleanest and most fuel-efficient diesel engines are coming to the market in 2027 where they will **reduce NOₓ emissions by 82% of the remaining 1% of pollutants**.
- Eliminating the 12% Federal Excise Tax on new truck purchases would **incentivize fleets to invest in cleaner and safer trucks**.

**Comparison of Life-Cycle CO₂ Emissions for Four Class 8 Truck Classifications**

Preparing for Electrification

- **Preparing today’s commercial vehicle fleet** for electrification would require the commercial vehicle industry to **invest upwards of $620 billion** in charging infrastructure alone, including chargers, site infrastructure and electric service upgrades.¹

- Utilities would need to **invest $370 billion** to upgrade their grid networks to meet the demands of just commercial vehicles.¹

- This nearly **$1 trillion expenditure** does not account for the cost of new battery-electric trucks, which according to market research can be two to three times more expensive than their diesel-powered equivalents. For example, a diesel Class 8 truck costs roughly $180,000, while a comparable battery-electric truck costs over $400,000.

- A recent ATRI analysis found that if today’s diesel tractors were replaced with much heavier electric trucks - one-third of the truckload sector would suddenly be too heavy for U.S. roads. The result: additional electric trucks would be needed to move the same amount of freight as a diesel truck. **For every 1,000 electric trucks, an additional 343 electric trucks would be required due to battery weight.**

- Available battery-electric trucks operate with limited range. Long-haul battery electric trucks have a **range of about 150-330 miles and can take up to 5-8 hours to charge**-assuming chargers are available. In contrast, diesel equivalent trucks spend 15 minutes fueling anywhere in the country and then travel about 1,200 miles before fueling again.

### Infrastructure Spend

<table>
<thead>
<tr>
<th>Commercial Vehicle Industry:</th>
<th>Utility Companies:</th>
<th>Ratepayers &amp; Consumers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>$620 Billion</td>
<td>$370 Billion</td>
<td>$???</td>
</tr>
</tbody>
</table>