RINs, LCFS Credits, and other E15 and Flex Fuel Marketer Math
Pearson Fuel Depot w/ 10 Fuels and Pressures

- Propane
- E85 Ethanol
- Natural Gas (3,000 psi)
- BioDiesel
- EV Charging
- Diesel, 3-Grades of Gasoline
- Natural Gas (3,600 psi)
2015 Sales by Product

- Reg Gas: 730K
- E85: 456K
- Diesel: 193k
- Prem-Gas: 122k
- Mid-Gas: 86k
There are 206 E85 fueling locations in CA

178 Retail stations
28 Government

Includes 23 opened by Pearson so far in 2019
California E85 Sales

Annual E85 Sales

State of CA

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>11.1M</td>
</tr>
<tr>
<td>2015</td>
<td>14.8M</td>
</tr>
<tr>
<td>2016</td>
<td>18.7M</td>
</tr>
<tr>
<td>2017</td>
<td>23.9M</td>
</tr>
<tr>
<td>2018</td>
<td>33.8M</td>
</tr>
<tr>
<td>2019</td>
<td>37.0M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>MN</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of E85 sites</td>
<td>431</td>
<td>206</td>
</tr>
<tr>
<td>Avg. gallons per station</td>
<td>3,354</td>
<td>15,008</td>
</tr>
</tbody>
</table>
California Gasoline Math

Assume Ethanol = $1.65  //  Unleaded = $1.75  //  RINs $.20

<table>
<thead>
<tr>
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<td>Ethanol</td>
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<td>Gas</td>
<td>$1.575</td>
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## California Gas vs E85 Math

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E15 and E85 volumes vs E10
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- 25 mpg would mean 200 million gallons
- 5% incremental ethanol is 10 million gallons
- Pearson sold 27 million gallons of E85 mid 2018 through mid 2019
- 73% incremental ethanol is 19.7 million gallons.
Will the automakers keep making the cars?

- Automakers were incentivized to make Flex Fuel Vehicles for many years.
- 21 million FFV’s on the road now.
- That will decline due to NHTSA and EPA policies.
- UNLESS WE RESTORE FFV CREDITING.
Corporate Average Fuel Economy (CAFE/ NHTSA)
and Greenhouse Gas (EPA/GHG)

- Much of the data the EPA and NTSA used to adjust the CAFE and GHG regulations was incorrect.

- Pervasively negative comments:
  
  “E85 has not caught on”

  “Limited number of stations”

  “Consumers have not embraced it”
EPA Assertions

- EPA Asserts less than 1% of the fuel that FFV’s consume is E85. (CA data indicates 3% and rapidly growing (40% 2017 to 2018.)
- EPA asserts FFV drivers do not seek to utilize E85 and that no growth in fuel demand is anticipated.
- As a result- the GHG and CAFE credits have been substantially cut and FFV production has been rolled back.
F-Factor reinstatement

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- Pearson Fuels is determined to bring back the F-factor and keep FFVs on the road
Where are the interest groups?

- Auto Alliance - Supporting a new F-factor
- Electric Vehicle Supporters - Received multipliers in the CARB Ford/Honda/BMW/VW Deal
- Environmental Groups - Highly skeptical of biofuels, many oppose FFV crediting
- Ethanol Groups - FFVs viewed by some as a lost battle; now as a path to a bigger ethanol market, high octane vehicles, mid-level ethanol blends, and blender pumps
EPA declared it is "proud to announce its intention to further explore opportunities to remove regulatory burdens that prevent marketplace entrance and growth to natural gas, flexible fuel vehicles, and E85 fuels".

8/9/19
How to keep E85 alive?

- Support and Participate in the Pearson Fuels Campaign Directly
- Encourage your trade association to participate in DC and in your state
- Support the necessary technical work to demonstrate a high F-factor
- Comment on:
  - An F-factor for MY 2019-2026
  - Full crediting under CAFE and GHG Programs
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