Green Drives 2017
Case Studies in Local Freight & Delivery

Sheehy Mail Contractors, Inc.
Lessons Learned Fleet Implementation
Presentation Topics

The Company → The Goal → The Process → The Results → The Conclusion → The Future
Sheehy Mail Contractors, Inc.

• Established in 1952 as a US Mail Contractor
• Private Family Business Operated by 3rd and 4th Generations
• Operate 100+ Vehicles
• Employ 250+ employees
• Innovative
  • Telematics Company Ownership
  • History of Green Initiatives
  • Early Adopter CNG
The Goal

• 2012 Investigate the Feasibility of Class 8 Vehicles for our Business
  • Invitation by PMG Patrick Donahoe
  • Interest by the USPS created the opportunity to pursue.

• Tested 10 Trucks in Mid-2013 (Cummins 12L)
  • Tested MPG vs. Diesel
  • Tested Ability to operate the trips
  • Tested Range capabilities

• Late 2013 Changed Specification to Meet Testing results
  • Needed Longer range tanks (160 Agility BOC)
  • Located Fueling partners
  • Anchor Tennant arrangement in Milwaukee

• December 2013 set goal to become 100% CNG
  • Ordered 66 Trucks
  • Prepared Finance plans
The Process

• Created a feasibility plan
  • Tested the Trucks
  • Enhanced the Specification
• Established Nationwide Fueling Partners
  • Estimated Fuel usage at each fuel stop
  • Prepared routes
• Driver Training
  • Prepared Drivers for New reality
  • Driving training and fuel Training
• Prepared Shops and Trained Technicians
  • Needed to be able to self-sustain, service facilities were few
  • Created a vertical operation to insure up-time and reliability
• Expanded and Executed our Plan to achieve our goal.
The Results

**All MPG calculations and costs are measured by DGE.**

**Grant Awards and VETC consideration was considered in the “Help” Category**

**Maintenance Costs were presumed to be neutral**

**Investment Costs were calculated by the Difference between New Diesel Trucks and New CNG Trucks**

---

**Table 1: Yearly RPM and MPGE Calculations**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Miles</th>
<th>CNG Miles</th>
<th>Diesel Miles</th>
<th>CNG %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>9,918,535.60</td>
<td>-</td>
<td>9,918,535.60</td>
<td>0%</td>
</tr>
<tr>
<td>2013</td>
<td>11,953,189.20</td>
<td>268,675.00</td>
<td>11,684,514.20</td>
<td>2%</td>
</tr>
<tr>
<td>2014</td>
<td>12,002,888.90</td>
<td>2,253,535.20</td>
<td>9,749,353.70</td>
<td>19%</td>
</tr>
<tr>
<td>2015</td>
<td>14,884,358.30</td>
<td>10,701,976.30</td>
<td>4,182,382.00</td>
<td>72%</td>
</tr>
<tr>
<td>2016</td>
<td>11,260,820.70</td>
<td>9,943,335.20</td>
<td>1,317,485.50</td>
<td>88%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>60,019,792.70</strong></td>
<td><strong>23,167,521.70</strong></td>
<td><strong>36,852,271.00</strong></td>
<td><strong>39%</strong></td>
</tr>
</tbody>
</table>

**Table 2: Yearly Cost Per Mile Calculations**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost Per Mile</th>
<th>Actual</th>
<th>If All CNG</th>
<th>Just CNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>-</td>
<td>(0.33)</td>
<td>(0.33)</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>(0.01)</td>
<td>(0.28)</td>
<td>(0.33)</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>(0.05)</td>
<td>(0.22)</td>
<td>(0.28)</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>(0.07)</td>
<td>(0.06)</td>
<td>(0.09)</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>(0.03)</td>
<td>(0.04)</td>
<td>(0.03)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>(0.03)</td>
<td>(0.18)</td>
<td>(0.09)</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3: Yearly GHG Emissions Calculations**

<table>
<thead>
<tr>
<th>Year</th>
<th>GHG</th>
<th>Trees Planted</th>
<th>Cars Off Road</th>
<th>Recycled</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2013</td>
<td>103</td>
<td>2,655</td>
<td>22</td>
<td>37</td>
</tr>
<tr>
<td>2014</td>
<td>825</td>
<td>21,151</td>
<td>174</td>
<td>296</td>
</tr>
<tr>
<td>2015</td>
<td>3,723</td>
<td>95,318</td>
<td>786</td>
<td>1,335</td>
</tr>
<tr>
<td>2016</td>
<td>3,307</td>
<td>84,685</td>
<td>698</td>
<td>1,186</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>7,958</strong></td>
<td><strong>203,809</strong></td>
<td><strong>1,680</strong></td>
<td><strong>2,854</strong></td>
</tr>
</tbody>
</table>

**Table 4: Yearly ROI with and without Help Calculations**

<table>
<thead>
<tr>
<th>ROI with Help</th>
<th>Actual</th>
<th>If All CNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td><strong>117%</strong></td>
<td><strong>322%</strong></td>
</tr>
<tr>
<td>2013</td>
<td><strong>49%</strong></td>
<td><strong>254%</strong></td>
</tr>
</tbody>
</table>
The Conclusions

• Sheehy Operations align with the use of CNG as a transportation fuel
  • Predictable routes
  • Repetition

• Fuel Cost Savings is real but as volatile as the Diesel Oil Price Market
  • CNG Price stability allows for good Cost controls and price Predictability
  • Chasing the market does not gain best results
  • Embrace and Accept the paradigm shift, Only with steady sustained effort will you get maximum results.

• Cooperation with Shippers, suppliers (Fuel and Equipment) is key

• Learning Curve is steep if not committed.

• In order to manage CNG you must be able to measure the results
Future State

- Carrier must have a plan
  - What are the goals for the Carrier
  - Can the Carrier make it work
  - What are the common goals
    - Environmental
    - Economical
- Customer is critical in executing the plan
  - Alignment is necessary
  - Education and Goal Assessment
  - Only considering the Price factors is a mistake
- Risk Assessment
  - Cost of running CNG vs. Diesel (Yesterday/Today/Tomorrow)
  - Customers Willingness to participate
  - Understanding Each Parties risk/reward
- Willingness to stay the course and Expand the projects
  - Does not work to “try” must be committed
  - Expansion and Training create synergies
  - Innovative ideas work over time, this is not a “Quick Hit”
Thank You!