2.3 and 2.3.a: Fleet Efficiency and Alternative Fueled Vehicles

**Why is measuring the fuel efficiency important?**

- In 2014, State of Washington burned over 8 million gallons of fuel
  - Approx. total cost of $27,000,000
  - An 8% reduction equates to saving of $2,000,000
Current Status: Early data indicates increased MPG

- DES 2015 Calendar Year MPG improvement
- New vehicle MPG is increasing across all vehicles types
- Received Calendar Year 2015 fuel data
  - Voyager/Comdata
  - bulk fuel purchases
  - WADOT
  - POV reimbursement data analysis and formatting prior to sending to agencies to bi-annual ECY reporting

<table>
<thead>
<tr>
<th></th>
<th>Total Miles</th>
<th>Total Gallons</th>
<th>Overall MPG</th>
<th>Vehicles in Service During the Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>47,282,214</td>
<td>1,957,065</td>
<td>24.16</td>
<td>4318</td>
</tr>
<tr>
<td>2014</td>
<td>42,234,374</td>
<td>1,765,516</td>
<td>23.92</td>
<td>3822</td>
</tr>
<tr>
<td>2013</td>
<td>35,972,117</td>
<td>1,506,862</td>
<td>23.87</td>
<td>3176</td>
</tr>
<tr>
<td>2012</td>
<td>33,025,557</td>
<td>1,338,910</td>
<td>24.67</td>
<td>2679</td>
</tr>
<tr>
<td>2011</td>
<td>26,614,187</td>
<td>1,065,204</td>
<td>24.99</td>
<td>2349</td>
</tr>
<tr>
<td>2010</td>
<td>23,821,188</td>
<td>938,731</td>
<td>25.38</td>
<td>1963</td>
</tr>
</tbody>
</table>

Current Status: Making strides towards meeting our goal

- Currently 2,395 vehicles in services
- Shift towards battery electric vehicles

To 16 Fuel Use Agencies/Higher-Ed

<table>
<thead>
<tr>
<th></th>
<th>Hybrid</th>
<th>PHEV</th>
<th>BEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtotals</td>
<td>2274</td>
<td>21</td>
<td>100</td>
</tr>
<tr>
<td>16 Agency Total</td>
<td>2395</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The game is changing...
Problem/Opportunity: Data collections and reliability

- 2013 vs 2014 Fuel data

```
<table>
<thead>
<tr>
<th>Year</th>
<th>MPG</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>19.20</td>
</tr>
<tr>
<td>2014</td>
<td>18.80</td>
</tr>
</tbody>
</table>
```

- Diverse vehicle applications

Problem:
- Consistent reporting and timeliness
- Multiple reporting requirements
- Drilling down to understand vehicle usage variances and root causes

Opportunities:
- Statewide standard for mileage reporting (Telematics, DES annual vehicle and mileage database)
- Advancements in battery technology (200mi range EV)

Problem/Opportunity: Long Range Electric Vehicles

- 2017 Chevrolet Bolt with a “B”

Problem:
- Inadequate charging infrastructure at state facility
- Driver anxiety and lack of knowledge
- Requires executive support to be successful

Opportunities:
- Washington State Electric Fleet Initiative
- WSCA-NASPO Procurement collaborative
- Electric Vehicle Service Equipment (EVSE) is standardizing
- Education and training
Opportunity: Electric vehicles are moving towards mainstream acceptance and the infrastructure is improving.

2.3: Improve the efficiency of the state fleet by increasing the miles per gallon by 8% (from 17 mpg in 2014 to 18.4 mpg by 2018)

Strategies: Engagement and Partnership with agencies

- Automated Key-box Systems
- State Vehicle & Mileage Reporting
- Telematics Pilot Project
- Develop standard reporting templates
- Replace vehicles with the most fuel efficient model available using standardized vehicle replacements lists
- Expansion of INVERS automated key-box systems
2.3.a: Increase the number of alternative fueled and hybrid vehicles in the state fleet from 3,836 in 2015 to 6,000 by 2018

**Strategies:** DES is taking the leadership role: at least 20% of all 2017 Model Year vehicles purchased will be electric vehicles

- Achieving our goal equates to approx. 200-300 new electric vehicles
- Agency engagement to provide electric vehicle trainings
- Hybrids will be the second option

![Image of electric vehicle]

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2.3.a: Increase the number of alternative fueled and hybrid vehicles in the state fleet from 3,836 in 2015 to 6,000 by 2018

**Action Plan:**

<table>
<thead>
<tr>
<th>Task</th>
<th>Task Lead</th>
<th>Expected Results</th>
<th>Status</th>
<th>Due Date</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Below</td>
<td>George Carter Fleet Manager</td>
<td>8% improvement in mpg from 2014 levels</td>
<td>On Track</td>
<td>12/1/2018</td>
<td>All state agencies with state vehicles</td>
</tr>
<tr>
<td>1) 20% of passenger vehicles purchased to be electric vehicles.</td>
<td>George Carter</td>
<td>Estimated 4% gain</td>
<td>On Track</td>
<td>12/1/2018</td>
<td>All state agencies with state vehicles</td>
</tr>
<tr>
<td>2) Replace other vehicles with the most fuel efficient vehicle available.</td>
<td>George Carter</td>
<td>Estimated 3% gain</td>
<td>On Track</td>
<td>12/1/2018</td>
<td>All state agencies with state vehicles</td>
</tr>
<tr>
<td>3) Downsize vehicles when replacing</td>
<td>George Carter</td>
<td>Estimated 2% gain</td>
<td>On Track</td>
<td>12/1/2018</td>
<td>All state agencies with state vehicles</td>
</tr>
<tr>
<td>See Below</td>
<td>George Carter Fleet Manager</td>
<td>56% increase in the number of alternative fuel and hybrid vehicles in 2018 from 2015 levels (from 3,836 to 6,000 vehicles)</td>
<td>On Track</td>
<td>12/1/2018</td>
<td>All state agencies with state vehicles</td>
</tr>
<tr>
<td>1) 20% of passenger vehicles purchased to be electric vehicles.</td>
<td>George Carter</td>
<td>Estimated 900 vehicles</td>
<td>On Track</td>
<td>12/1/2018</td>
<td>All state agencies with state vehicles</td>
</tr>
<tr>
<td>2) Replace other vehicles with hybrid vehicles when available.</td>
<td>George Carter</td>
<td>Estimated 650 vehicles</td>
<td>On Track</td>
<td>12/1/2018</td>
<td>All state agencies with state vehicles</td>
</tr>
<tr>
<td>3) Replace larger vehicles with bio-diesel capable vehicles.</td>
<td>George Carter</td>
<td>Estimated 800 vehicles</td>
<td>On Track</td>
<td>12/1/2018</td>
<td>All state agencies with state vehicles</td>
</tr>
</tbody>
</table>
Assistance Needed:

• Executive level support to champion our efforts
• Take this information back and share with fleet, facility, and finance departments

Three Goals
• Assist Governor’s Goal to Create a Sustainable Environment
• Reduce POV Reimbursement
• Provide the Right Tool for the Job

Consolidated Motor Pool Project
Robin Dildine-Gwin
Dept. Labor and Industries

Benefits

Challenges
• Culture Shift
  • What exactly can I do with an electric vehicle?
  • What do you mean I don’t own the car?
  • I want to drop off the car and binder at midnight on Sunday….
Thank you

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DES Fleet Operations and Parking Services Manager
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