AIR QUALITY & CLIMATE CHANGE
Installed 5 chargers in the region (Lvl 2)

2012

Community Charging Infrastructure Fund

Early 2014

Late 2014

EV Business Case
BUSEINESS CASE

- FAQ: history, capability, safety records, battery life, EVSE
- Air quality, GHG Benefits
- Fleet needs & suitability assessment
- Financial analysis
- Alternatives
# FINANCIAL ANALYSIS

<table>
<thead>
<tr>
<th></th>
<th><em>Ford Escape S</em></th>
<th><em>Toyota Prius</em></th>
<th><em>Ford Focus</em></th>
<th><em>Toyota Corolla</em></th>
<th><em>Nissan Leaf S</em></th>
<th><em>Ford Focus EV</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fuel type</strong></td>
<td>Gasoline</td>
<td>Gasoline</td>
<td>Gasoline</td>
<td>Gasoline</td>
<td>Electric</td>
<td>Electric</td>
</tr>
<tr>
<td><strong>Average annual mileage</strong> (km/year)</td>
<td>13,000</td>
<td>13,000</td>
<td>13,000</td>
<td>13,000</td>
<td>13,000</td>
<td>13,000</td>
</tr>
<tr>
<td><strong>Expected service life (years)</strong></td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Average ‘fuel’ economy per km</strong></td>
<td>0.09 L</td>
<td>0.047 L</td>
<td>0.076 L</td>
<td>0.074 L</td>
<td>0.1875 kWh</td>
<td>0.2063 kWh</td>
</tr>
<tr>
<td><strong>Cost of gasoline ($/L)</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1.35 - 1.74</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Cost of electricity ($/kWh)</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.0748 - 0.096</td>
<td>0.0748 - 0.096</td>
<td>0.0748 - 0.096</td>
</tr>
<tr>
<td><strong>Fuel costs over 7 years</strong></td>
<td>$12,653.55</td>
<td>$6607.97</td>
<td>10685.22</td>
<td>10404.03</td>
<td>$1457.12</td>
<td>$1603.22</td>
</tr>
<tr>
<td><strong>Maintenance costs over 7 years</strong></td>
<td>$5,091.67</td>
<td>$5,091.67</td>
<td>$5,091.67</td>
<td>$5,091.67</td>
<td>$2,072.31</td>
<td>$2,072.31</td>
</tr>
<tr>
<td><strong>Insurance costs over 7 years</strong></td>
<td>$10,846.10</td>
<td>$14,285.35</td>
<td>$11,984.36</td>
<td>$12,828.67</td>
<td>$12,275.04</td>
<td>$13,393.68</td>
</tr>
<tr>
<td><strong>Manufacturer’s sugg. retail price</strong></td>
<td>$23,499</td>
<td>$26,155</td>
<td>$19,699</td>
<td>$15,995</td>
<td>$33,788</td>
<td>$36,199</td>
</tr>
<tr>
<td><strong>Resale/salvage value</strong></td>
<td>$4229.82</td>
<td>$4707.90</td>
<td>$3545.82</td>
<td>$2879.1</td>
<td>$6081.84</td>
<td>$6515.82</td>
</tr>
<tr>
<td><strong>Service Life GHG Emmissions Offset</strong></td>
<td>$591.00</td>
<td>$309.00</td>
<td>$498.00</td>
<td>$459.00</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Life Cycle Cost (7 years)</strong></td>
<td>$48,451.50</td>
<td>$47,741.08</td>
<td>$44,412.43</td>
<td>$41,899.27</td>
<td>$43,510.63</td>
<td>$46,752.39</td>
</tr>
</tbody>
</table>

*Note: This analysis was done without the inclusion of provincial or federal incentives*
2012: Community Charging Infrastructure Fund

Early 2014: Installed 5 chargers in the region (Lvl 2)

Late 2014: EV Business Case

2015: Acquisition of two EVs

2016: Acquired two more EVs Installed two DCFC
CHALLENGES & LESSONS LEARNED

- Clear specifications on tender documents
- Community charging infrastructure needed
- Dedicated charging station per fleet vehicle
- Vehicle type options and constraints
- Staff training
1. Establish a business case
2. Install charging infrastructure
3. Obtain network accounts
4. Procure vehicle
5. Develop & Implement training
6. Evaluate

RECOMMENDATION FOR OTHERS
5,000 LITRES

12,000 KG CO2

OF GAS SAVED PER YEAR

FROM BEING EMITTED INTO THE ATMOSPHERE
NEXT STEPS

- AWD Electric Vehicles
- Twin Chilliwack DCFC
- Potential Hydrogen
- Install 8 Level 2 chargers
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