Electric Transportation

Three aspects of electric transportation:

• It potentially offers consumers a lower-cost alternative to gasoline

• It decreases greenhouse gas emissions from the transportation sector

• And it reduces dependence on imported petroleum
Electric Transportation

Base Scenario

- High PHEV penetration levels: 50% by 2020
  - What we need to do
  - How do it
## Electric Transportation

**Electric transportation technology:**

| Electric vehicle | Plug-in hybrid electric vehicle  
| Battery electric vehicle  
| Fuel-cell vehicle  
| (Hybrid electric vehicle doesn’t consume electric energy from grid and can be classified into traditional transportation) |

| Electric train |  

Electric Transportation

Proposed data needs to be developed:

<table>
<thead>
<tr>
<th>Cost</th>
<th>Vehicle/train cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fuel cost</td>
</tr>
<tr>
<td></td>
<td>Electricity cost</td>
</tr>
<tr>
<td>Emission</td>
<td>Emission from vehicle</td>
</tr>
<tr>
<td></td>
<td>Emission from grid</td>
</tr>
</tbody>
</table>

- Study “existing infrastructure data” to see the electric transportation data will be given in which form.
Electric Transportation

• Understand the value of the PHEV technology
  • – CO2 emissions
  • – Gasoline consumption
• Understand the impact of the PHEV on the electric system