Green Manufacturing: Way Forward

Automotive Industry

07 August 2015
Background

A. Structure of PH Auto Industry

- Parts Manufacturers: 272 OEMs
- Vehicle Assemblers
  - Passenger Cars: 4
  - Commercial Vehicles: 14
- Pure CBU Importers: 24

2014 Industry Performance

<table>
<thead>
<tr>
<th></th>
<th>No. of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Volume</td>
<td>269,164</td>
</tr>
<tr>
<td>Production Volume</td>
<td>86,217</td>
</tr>
</tbody>
</table>

B. Current Vehicle Fleet

- Total Vehicle Registration (2014) → 3,592,482 units

C. Existing Regulations

- Emission Standards
  - Clean Air Act of 1999 (RA 8749)
  - Implementation of Euro 4 Vehicle Emission Limits (DENR AO No. 2015-04)
- Currently no regulation on fuel efficiency

Estimated Age of Vehicle Fleet (12 years and older)*

= 51% of 2012 registered vehicles or ~1.7 Million vehicles

Source of basic data: * Philippine Auto Manufacturing Industry Roadmap (November 2012)
Current Issues

Motor Vehicle Life Cycle

Parts Manufacturing ➔ MV Manufacturing ➔ Service Phase ➔ End-of-life

1 Parts & Vehicle Manufacturing

A. Current environmental practices

<table>
<thead>
<tr>
<th>ISO 14000 series</th>
<th>Parts Manufacturers</th>
<th>Vehicle Manufacturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Around 42%* certified</td>
<td>• ISO 14001 certified</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiatives/Programs</th>
<th>Parts Manufacturers</th>
<th>Vehicle Manufacturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Minimum environmental standards compliance, tree planting, river/coastal clean up,</td>
<td>• Green Procurement/Purchasing Guidelines, Green Dealership, water treatment facility, energy conservation measures, tree planting/adopt-a-forest</td>
<td></td>
</tr>
</tbody>
</table>

Source of basic data: * Based on supplier’s profile of one auto company
# Challenges & Support Needed

## Parts & Vehicle Manufacturing

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Support Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable vehicle &amp; parts manufacturing</td>
<td>Collaboration between the academe &amp; industry to identify measures on how to incorporate sustainability initiatives in the manufacturing plants:</td>
</tr>
<tr>
<td></td>
<td>➢ Shift to low-carbon technologies</td>
</tr>
<tr>
<td></td>
<td>➢ Use of renewable energy</td>
</tr>
<tr>
<td></td>
<td>➢ Reduce water consumption, etc.</td>
</tr>
<tr>
<td>Increase number of ISO 14001 certified parts manufacturers</td>
<td>Industry to encourage parts manufacturers to secure ISO certification</td>
</tr>
<tr>
<td>Production of “cleaner” vehicle</td>
<td>Government to provide incentives to the manufacture, assembly, importation and use of AFVs</td>
</tr>
<tr>
<td>Affordable clean vehicle</td>
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</tbody>
</table>
2 Service Phase of Vehicle

A. Emission Regulation → Motor Vehicle Inspection System (MVIS)

Vehicle Inspection

<table>
<thead>
<tr>
<th>Operated by</th>
<th>Inspection / Testing Centres</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>Only 5 Motor Vehicle Inspection Centre (MVIC) operational</td>
<td>Regular inspection of Government, For Hire and Diplomatic vehicles</td>
</tr>
<tr>
<td>Private (temporary measure)</td>
<td>893 (As of Dec 2012) Private Emission Testing Center (PETC)</td>
<td>Simple emission test for private vehicles only</td>
</tr>
</tbody>
</table>

B. Enforcement of MVIS

- Not strictly implemented → instances of issuance of Certificate of MVIS Compliance with “no appearance” (no actual testing of vehicle)
## Challenges & Support Needed

### Service Phase of Vehicle

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<th>Support Needed</th>
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<tr>
<td>Improve level of fuel efficiency &amp; emission</td>
<td>- Government, in consultation with stakeholders, to develop fuel efficiency policy</td>
</tr>
<tr>
<td></td>
<td>- Government to strictly enforce the Motor Vehicle Inspection System (MVIS)</td>
</tr>
</tbody>
</table>

### Status of MVIS Project

- MVIS project structure as Build-Operate-Transfer is already approved to be undertaken as a Public-Private Partnership (PPP) Project
  - Privatization of MVIS expected to address enforcement issues
  - Opposition from certain groups on the privatization due to possible increase in inspection fees
  - Status as of July 2015 → on-going preparation of feasibility studies
Current Issues

Motor Vehicle Life Cycle

End-of-life Vehicle

A. Current Situation

- No existing vehicle recycling/scrapping facility
- No vehicle end-of-life policy

B. Challenges

- Set-up of vehicle recycling/scrapping facility requires huge capital investment & new technology
- Vehicle end-of-life policy may face strong opposition from vehicle owners
End-of-life Vehicle

C. Support Needed

- Government to implement end-of-life policy
- Government to invite investors to set-up vehicle scrapping/recycling facility
- Collaboration between government & private sector on vehicle recycling & scrapping program

Ex. Offer incentives to target group to replace old vehicles with new, fuel-efficient vehicles (public transport – old jeepneys to be replaced with e-Jeepneys)
Future of Auto Industry

① Parts Manufacturing
   - Under the Auto Parts Roadmap Strategies
     - Fiscal incentives for local manufacturing
     - Certification of Environmental Management System (ISO 14001)

② Vehicle Manufacturing

Next 10 years, industry still manufactures conventional vehicles

Why?

- Market is price-driven
- High cost of owning and operating green vehicles
- Insufficient number of complementary infrastructure
- Green vehicle production is more environmentally intensive than conventional vehicle production