DOE’s Role In Promoting Green Industry Initiatives in Malaysia

Ramli Abd Rahman
Head, Green Industry Unit
Department of Environment Malaysia

MPMA Sustainability Conference 2013
Malaysia’s commitment in Low Carbon and Green Initiatives

• At the United Nations Conference on Climate Change (UNFCCC)—COP 15 Copenhagen, Malaysia had announced its commitment to reduce the carbon footprint by 40% in terms of emission intensity of GDP by 2020 compared to the 2005’s levels.
STAKEHOLDERS INVOLVED IN PROMOTING LC & GD IN MALAYSIA

- NRE
- MEGTW
- MITI
- MOF
- MOA

- DOE
- SIRIM
- MPC
- MGTC

- ENSEARCH
- MGCC
- SME Association

- Local universities
DOE’s commitment in Low Carbon and Green Initiatives

• To ensure big / multinational industries to comply with the emission and discharge standards by enforcing the Environmental Quality Act and its regulations.

• To promote and encourage the industries to implement Green Industry Initiatives / Cleaner Production. The main target is Small and Medium Industries.
What is Cleaner Production

- UNEP 1991: “CP is the continuous application of an integrated preventative environmental strategy to processes, products and services to increase efficiency and reduce risks to humans and the environment”.

- Cleaner Production aims to prevent pollution, reduce the use of energy, water and material resources and minimise waste, profitably and without reducing production capacity.
Cleaner Production helps companies:

- Increase productivity
- Reduce production costs
- Use resources more efficiently
- Produce safer and better products and services
- Reduce levels of pollution and risk
- Comply with Environmental Management Systems and get ISO 14000 certified
- Improve company image
WHY SMALL AND MEDIUM ENTERPRISES (SMEs) BE THE TARGET?

• SMEs in Malaysia account for about 99.2% or 518,996 of total establishments in the three main economic sectors of manufacturing, services and agriculture in 2003.

• Major contributor to environmental pollution in Malaysia with more than 70% of industrial pollution is produced by SMEs.

• Produce hazardous material such as lead (Pb), mercury (Hg) and cadmiun (Cd) as well as a range of greenhouse gases such as sulphur and carbon dioxides
ROLE OF GREEN INDUSTRY UNIT, DEPARTMENT OF ENVIRONMENT MALAYSIA

- Green Industry Unit has been entrusted to promote the Green Industry Initiatives to SMEs to help build the low carbon society in Malaysia.
Programs carried out by Green Industry Unit, DOE

Promotion of Green Industry Initiatives to Malaysia Industries thru Outreach programs - seminars, workshops, dialogues, round table meeting.
Green Industry Initiatives / CP Project Demonstration for SMEs

2. Audit activities, implementation of CP options and monitoring were conducted.
3. 254 CP options were generated and 78 options were implemented by the premise. Other options will be implemented in phases subject to budget and time.
Option implemented: Change existing piping (1-1/2”) to (2”x2-1/2”) jacketed piping (NEW)

Benefit: Increase in flow rate, saving in production time, increase in efficiency

Before: Yearly blending time: 4212 hours
        Yearly electricity consumption: RM598.56

After: Yearly blending time: 2808 hours
       Yearly electricity consumption: RM393.00
Installation of transparent roof

### Investment

<table>
<thead>
<tr>
<th>No.</th>
<th>Type</th>
<th>Cost /unit (RM)</th>
<th>Total unit</th>
<th>Total cost (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transparent panel</td>
<td>60</td>
<td>10</td>
<td>600</td>
</tr>
<tr>
<td>2</td>
<td>Installation</td>
<td>60</td>
<td>10</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>600</strong></td>
<td><strong>10</strong></td>
<td><strong>1200</strong></td>
</tr>
</tbody>
</table>

### Return

Installation of 10 unit transparent panels can reduce the usage of 10 unit mercury lights 450 watt from 3:00 to 6:00 p.m.

\[
10 \text{ lights} \times 0.45 \text{ kW} \times 3 \text{ hrs} \times \text{RM 0.30/hr} \times 20 \text{ days/month} = \text{RM 80/month}.
\]

Thus, payback period = 15 months
1. Dagang Batikraf was selected as a CP implementation demonstration premise. (2010/2011)

2. Audit activities, implementation of CP options and monitoring were conducted.
CP Options Generation

160 CP options generated and evaluated based on the effects on:

- Material Saving (including waste)
- Energy Saving (Electricity and heat)
- Reduction of Carbon Footprint
- Increase of Productivity
- Decrease the risks of safety and health
CLEANER PRODUCTION AUDIT COMPETENCY PROGRAM

Aim:

To create competent CP auditor among DOE officers

Status:

- 88 officers passed Level 1 Competency (From 2009 - 2012)
- 22 officers passed Level 2 Competency
- Level 3 Competency Program started in 2012, and will be completed in May 2013
CP Audit Assistance and Technical Advice Program to SMEs.
CP Audit and Technical Assistance Program to SMEs.

- To identify Cleaner Production options that can be implemented by audited premises.

- To train DOE officers in CP Auditing.


- In 2013, 10 SME premises will be visited and carried out details CP audit. Options to enhance plant process and the operation will be generated and evaluated.

- The premises will be encouraged to implement the options based on their financial capabilities.
• Project Collaboration with other agencies.

Clean Batik Initiatives (CBI) with MGCC (2011-2012)

CP aspects include House keeping, Safety, Chemical management, Labeling and Documentation

Results of the project:
• Up to 50% of energy saving is achieved
• Health & safety has been implemented
• Environmental awareness has been created
• Challenges of the industry identified

100 Premises have been coached on CP by Technical Consultants appointed.
Information dissemination thru web site - GREEN INDUSTRY VIRTUAL CENTRE

• GIVC ia an application system based on web site, designed to disseminate and educate Malaysian citizen especially industries on the green industry initiatives / Cleaner Production
Networking with other agencies in the region

- Visit to Indonesia CP Center (ICPC) - 2009
- Visit by delegation from Vietnam - 2007
- Attending Conference in China - 2009
- Visit to ICPC
Green Industry Outreach Program –
Green Industry Outreach Program
Dissemination of CP Information—Brochures
Green Industry Outreach Program
Publication of CP Buletin
The functions of Green Industry Helpdesk (GIH) are:

- Offer Green Industry consultation service to Malaysian industries especially SMEs.

- As a reference centre and guidance on how to adopt Green Industry Initiative such as Cleaner Production (CP) and their benefits.

- Disseminate the information of Green Industry initiative offered by DOE and other agencies.

03-8871 2036
Helpdesk Operation
Started: 15 April 2013
Operation days:
Monday - Wednesday
Time: 9.00 am to 12.00 pm
Roles of DOE officers in enhancing CP practices in Malaysia

• Disseminate information on CP to industries especially SMEs through seminars, workshops, dialogues, exhibitions and distribution of posters, guidelines and brochures.

• Give advice and consultation on CP to industries

• Carry out CP audit on selected SME premises

• Enforce CP guidelines according to specific industrial sectors
Way Forward

- Create more CP Demonstration premises by specific industrial sector
- Publish more CP specific guidelines by sector of industry
- Train more DOE officers to become competent auditors
- Register qualified CP external auditors
- Enforce CP thru legal provision
Thank You