Effectiveness of Sectoral Approach and Reasonable Indicators

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Presentation Outline

- Global Emission and Reduction Potential
- Why Sectoral Approach?
- Importance of Reasonable Indicator Setting
- Policy to Realize the Reduction Potential
- Future Task
Drastic reductions of greenhouse gas emissions are necessary for the entire planet.

Source: IEA WEO2007
There is substantial economic potential for the mitigation of global GHG emissions over coming decades, that could offset the projected growth of global emissions or reduce emissions below current levels.

Mitigation potential differs between sectors, which suggests the necessity to consider situation of each sector.

Also, there are large mitigation potential in both developed and developing countries.

Source: IPCC
What is the “Sectoral Approach”? 

- **Sectoral Approach** realizes practical mitigation actions through:
  - Identifying the targeting sector
  - Conducting detailed survey on technology and emission
  - Developing indicators for benchmarking (intensity)
  - Identifying the best technologies and estimating reduction potential
  - Setting target (intensity/absolute)
  - Implementing actual mitigation by introducing identified technologies

- **Being practiced in various forum:**
  - APP
  - IEA
  - WBCSD
  - IISI etc.

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Possible efficiency indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Generation</td>
<td>CO2 emissions / GWh</td>
</tr>
<tr>
<td>Energy intensive industries</td>
<td>CO2 emissions or energy use / production output (t)</td>
</tr>
<tr>
<td>(Steel, Cement, Paper &amp; pulp etc.)</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>CO2 emissions or energy use / household</td>
</tr>
<tr>
<td>Transportation</td>
<td>CO2 emissions or energy use / freight or passengers</td>
</tr>
<tr>
<td>Waste</td>
<td>Methane emissions / waste buried CO2 emissions / waste incinerated</td>
</tr>
</tbody>
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Role of Proposed Indicators

- Proposed Indicators with benchmarking can be used for national/sectoral targets-setting
- Targets-setting by bottom-up sectoral approach have the following advantages:
  - Enable setting realistic and ambitious targets by investigation and estimation of technology and its progress properly,
  - Enable setting quantifiable, measurable and verifiable targets,
  - Realizing CO2 emission reduction, energy conservation and environmental protection simultaneously,
  - Applicable both to developed and developing nations,
  - Applicable to set comparable targets,
  - Giving confidence both to governments and the private sector by showing a tangible path to the targets.
- Cement, Steel, Power-Generation and Transportation sectors can cover 60-70 % of the total worldwide basis CO2 emissions.
Legally-binding "Top Runner Standards" covering 21 products have successfully achieved the remarkable improvement in energy efficiency.

The result of the Top Runner program:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Improvement of energy consumption efficiency (Results)</th>
</tr>
</thead>
</table>
| TV sets                            | 25.7%  
(FY 1997 - FY 2003)                                  |
| Video-cassette recorders           | 73.6%  
(FY 1997 - FY 2003)                                  |
| Air conditioners                   | 67.8%  
(FY 1997 - FY 2004)                                  |
| Electric refrigerators             | 55.2%  
(FY 1998 - FY 2004)                                  |
| Electric freezers                  | 29.6%  
(FY 1998 - FY 2004)                                  |
| Gasoline passenger vehicles        | 22.8%  
(FY 1995 - FY 2005)                                  |

<Concept of "Top Runner Program">

- Best available in the market "Top Runner"
- New target should be achieved on weighed average.
- New target
- can identify actual reduction potential with certain technologies; “Effectiveness”
- addresses international “Competitiveness”
- provides indicator for equitable framework establishing national reduction target, sectoral target and voluntary measure; “Equity”

**is promising elements for post-2012 framework**

Japan accelerate the work through G8 process next year.
(Broadening Countries and Sectors: Power, Transport, Home, Agriculture and Forestry, etc.)