Perspectives on implementation challenges at the national level

Key challenges

• Setting baselines – data collection
• Conducting cost-benefit analysis for specific policies and measures
• Establishing multi-stakeholder task forces and/or national committees
• Support from key stakeholders, government, academe, NGOs, private sector, civil society
Perspectives on implementation challenges at the national level

Panelists:

• Peter Kaigwara, Energy Regulatory Commission, Kenya
• Asawin Asawutmankul, Department of Alternative Energy Development and Efficiency, Thailand
• Diana Leandro, Ministry of Environment and Energy, Costa Rica
• Wenjing Yi, Energy Research Institute, P.R. China
• Ana Petrovska, Regional Environmental Center, Macedonia
• Viridiana Vazquez, CONUEE, Mexico
• Eric, Conception, Ministry of Environment, Peru
Perspectives on implementation challenges at the national level

• Describe your role in establishing fuel economy policies in your countries.
• Describe the institutional framework in setting up fuel economy policies, e.g. which ministry is ultimately responsible, and other ministries that needs to be involved, for example in adopting standards, putting in place feebate systems/taxation schemes
• Please identify and describe the major challenges that you face in your countries when developing and implementing fuel economy policies
• What kind of support does your country need in order to developing progressive fuel economy policies
THE GLOBAL FUEL ECONOMY INITIATIVE (GFEI) PILOT PROJECT IN KENYA

Peter N. Kaigwara
Energy Regulatory Commission, KENYA
Petroleum Consumption by Sector in Kenya

%age Petroleum Consumption by sector

- Road Transport: 69.3%
- Industrial and Commercial: 12%
- Power Generation: 1.8%

Energy Regulatory Commission
### New and Used LDV Population

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Grand Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>728</td>
<td>1,032</td>
<td>1,212</td>
<td>2,972</td>
<td>1.0</td>
</tr>
<tr>
<td>Used</td>
<td>92,410</td>
<td>95,452</td>
<td>109,260</td>
<td>297,122</td>
<td>99.0</td>
</tr>
<tr>
<td>Total</td>
<td>93,138</td>
<td>96,484</td>
<td>110,472</td>
<td>300,094</td>
<td>100</td>
</tr>
</tbody>
</table>
# Fuel Economy and CO$_2$ emission standards

<table>
<thead>
<tr>
<th>Year</th>
<th>Average fuel Consumption Metric combined(L/100Km)</th>
<th>Average CO$_2$ emission (g/Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>7.4</td>
<td>178.2</td>
</tr>
<tr>
<td>2011</td>
<td>7.6</td>
<td>182.0</td>
</tr>
<tr>
<td>2012</td>
<td>7.7</td>
<td>185.4</td>
</tr>
<tr>
<td>Grand Average</td>
<td>7.5</td>
<td>181.7</td>
</tr>
</tbody>
</table>
### CO$_2$ (g/km) and fuel consumption (L/100km)

<table>
<thead>
<tr>
<th>Vehicle Condition</th>
<th>Average of Fuel Consumption (L/100km)</th>
<th>Average of CO2(g/km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>7.3</td>
<td>176.2</td>
</tr>
<tr>
<td>Used</td>
<td>7.5</td>
<td>181.7</td>
</tr>
<tr>
<td>Grand Total</td>
<td>7.5</td>
<td>181.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year of vehicle registration</th>
<th>Fuel Type</th>
<th>Diesel</th>
<th>Petrol</th>
<th>Grand Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Diesel</td>
<td>8.0</td>
<td>7.2</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>Petrol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Diesel</td>
<td>7.9</td>
<td>7.5</td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>Petrol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Diesel</td>
<td>8.0</td>
<td>7.6</td>
<td>7.7</td>
</tr>
<tr>
<td></td>
<td>Petrol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Average</td>
<td>Diesel</td>
<td>8.0</td>
<td>7.4</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>Petrol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comparison of registration of petrol and diesel with hybrid engine type

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>15,234</td>
<td>13,106</td>
<td>13,300</td>
<td>41,640</td>
</tr>
<tr>
<td>Hybrid (Prius)</td>
<td>40</td>
<td>22</td>
<td>26</td>
<td>88</td>
</tr>
<tr>
<td>Petrol</td>
<td>77,862</td>
<td>83,356</td>
<td>97,148</td>
<td>258,366</td>
</tr>
<tr>
<td>Grand Total</td>
<td>93,136</td>
<td>96,484</td>
<td>110,474</td>
<td>300,094</td>
</tr>
</tbody>
</table>
Comparison of L/100km with select countries
Policies

I. Traffic Act, Chapter 403

II. Integrated National Transport Policy, 2009

III. National Transport and Safety Authority Act, No. 33 of 2012

IV. Standards Act, Cap 496
   - KS 1515:2000 — Code of practice for inspection of road Vehicles and limit in importation of used cars (8 years)
   - KS EAS 177M(2012)— Diesel Fuels: Specification – Reduced Sulphur from 500 ppm to 50 ppm
Challenges

- Low uptake of Absence of electric/hybrid vehicles in spite of a favourable taxation regime for them. Lack of awareness.
- Increase of motorcycles has high social cost implications: increased accidents, and environmental degradation – Mostly two stroke engines type.
- Regional integration challenges
- 8 year rule. Penalised importation of newer vehicles which are more efficient.
- Inadequate/lack of emissions testing capacity at MVIU
Challenges (cont.)

- Growing middle class/vehicle population – Infrastructure development not able to keep up
- Socio-economic and revenue considerations in view of 8 year rule elimination
- Lack of coordination framework among relevant laws/institutions
Overcoming the Challenges

- Policy recommendations in support of new technologies, e.g., hybrids – In the Draft Energy and Petroleum Policy, among others.
- Policy recommendations for phase-out of 2 stroke engines
- Work through Customs Union/Regional Integration (EAC)
- Motor Vehicle Inspection Unit (MVIU) now under National Transport Safety Authority (NTSA)
Overcoming Challenges (cont.)

- Finance Bill 2015
  - 8 year rule retained
  - Used cars below 3 years attract 30% tax.
  - Used cars above 3 years attract 150% tax
  - Smaller engines to have less tax

- Supervision of GFEI – Multi-sectoral approach
  - Energy Regulatory Commission (Chair and Implementation), Ministry of Energy and Petroleum, Ministry of Transport and Infrastructure, National Treasury, Ministry of Environment, National Transport and Safety Authority, National Environment Management Authority, Kenya Bureau of Standards, General Motors, Petroleum Institute of East Africa

- Lobbying – Relied on MOEP, National Treasury, PIEA, ERC
Vehicle Inspection:
The Motor Vehicle Inspection Unit to develop capacity to do the following:

- Conduct regular inspection inclusive of monitoring of emissions for all vehicles. *(short term)*
- Increase capacity of the Unit or license credible garages to provide the inspection services to all vehicles and motorcycles *(short term)*
Taxes:

The state to establish mechanisms to consider the following:

- Fuel tax options / tax rebate systems in relation to CO₂ emissions and fuel efficiency levels (Medium term).

- Reduce per capita annual kilometers travelled through travel demand management strategies (Short term)
Vehicle and fuel Standards:
The state to establish a framework to do the following:

- Phase out motorcycles with two stroke engines on account of high pollution and fuel consumption. *(Short term)*
- Implement all existing standards. *(Short term and Medium term)*
- Ensure competency of motorcycle riders, enforce proper loading and regular assessment for road worthiness.
Recommendations Cont……

Health surveillance:
The state to establish a framework to carry out the following:

- Continuous surveillance of total suspended particulate (TSP) matter and elemental concentrations. *(Short term / Continuous)*

- Conduct periodic estimation of economic burden of vehicle emission related illnesses to plan and implement control and prevention policies and programs. *(Short term / Continuous)*
Recommendations Cont......

Public Awareness:

The state to establish mechanisms to do the following:

- Public awareness on vehicle usage and vehicle efficiency implications to environment. *(Short term)*
- Improve competencies to screen diseases related to air pollutants. *(Short-term / Continuous )*
- Implement vehicle labeling for consumer information. *(Short-term)*
- Public awareness of social costs associated to motorcycles in the form of accidents and increased pollution. *(Short term)*
END

THANK YOU FOR LISTENING
China Energy Efficiency Framework

Energy Efficiency Competent Departments of Central government

- NGOs
- National Energy Conservation Center
- Standards and Labeling
- Energy Efficiency Service Associations

Energy Efficiency Competent Departments of Provincial and local level

- Local energy efficiency supervision organizations
- Local energy efficiency centers
- Enterprises and Individuals

Energy Conservation Law
China Energy Efficiency Policy Framework

Key Energy Conservation Initiatives
- Citizen Action Week
- Eliminating backward production capacity
- 10 key Energy Conservation Projects
- Top 10 thousand enterprises
- Promote energy efficient products
- Energy Performance Contract

Key Energy Conservation Policies

Command and Control
- Priority on Energy efficiency
- Better management
- Energy conservation target evaluation
- Supervision of key companies
- Energy statistics building
- Education and Commending
- International communication

Legal
- Energy Conservation Law revision
- Regulations and standards
- Energy Efficiency Labeling
- Fixed asset energy efficiency assessment
- Energy conservation law enforcement system
- Energy conservation supervision

Market
- Fiscal
- Tax
- Price
- Financial
Future trends…

- Most challenging economic and energy conservation phase for China during the 13th Five Year Plan
- Market oriented energy efficiency policies v.s. reforms
- Addressing climate change pressures as the top 1 emitters in the world
China’s Fuel Economy Standard Improvements

Stage I
2005-2008

MEPS

Stage II
2008-2013

Stage III
2013-2016

Stage IV
2016-2020
5L/100km

CAFE

5L/100km

Pre-study and comparison carried out by MIIT since 2011

Energy efficient and new energy vehicle development planning in 2012

Standardization Administration claimed the revision demand in 2014

CATARC undertook the executives (National Technical Committee of Auto Standardization)
To promote the development of new energy vehicles, the non-fossil fuel consumed is not counted before year 2020, and can be subtracted when calculating corporates’ fuel economy.

According to the study by CATARC, the Stage 4 Fuel Economy Standard will contribute to 35 million tons of oil equivalent savings and 113 million CO2 emissions reduction.
Stakeholders

- **Government**
- **Manufacturer**
- **Consumer**
- **Public**

**Taxes and fines**

**Technology improvement, competitiveness, and cost migrate**

**Choice and price 80% are new buyers**

**Energy saving, environmental benefits, other co-benefits**
Economy Policies

- **SHCP** Secretary of Finance
- **SE** Secretary of Economy
- **SENER** Ministry of Energy
- **PEMEX** Regulatory Commission Energy
- **CRE** Regulatory Commission Energy
- **CONUEE** National Comisión for Efficient Use of Energy.

In 2014 consumed 18 million fuel savings and 17.3 million had fuel.
The authorities assumed:

- Payment of vehicular endorsement (refrendo)
- Be in good standing with the Treasury of the Federal District for taxes and local services (property, water or backward holdings, for example).
- Card count to force Circulation Chip

What tax pay hybrids or electric cars?
Electric cars or hybrids will be subsidized 100% payment of tenure and without prejudice to the obligations that apply in your case.
The importation of used vehicles from the United States has been a major factor in this growth, since it has led to an increase in the average age of the park and has generated concerns as to the low average kilometers per liter gasoline and increasing emissions of greenhouse gases. (GEI)
CO₂ Emissions
New Vehicles

Resultado: Altas emisiones de CO₂ en vehículos nuevos

[1] El Objetivo de China corresponde al escenario de la flota a gasolina. Si se incluye otro tipo de combustible, el objetivo sería más bajo.