The Global Fuel Economy Initiative (GFEI)

Update on activities

PCFV – March 5-6th 2019

Sheila Watson, Deputy Director, FIA Foundation
Context - Climate change mitigation by sector

- Transport needs to contribute 18% to global carbon emission reductions to reach a 2DS (2 degree scenario)
- Most of the vehicle fleet growth will take place in non-OECD countries
- Climate targets cannot be reached without contribution from them.
About GFEI

• Launched in 2009, with target of doubling average global fuel economy (‘50by50’) in cars / ‘light duty vehicles’
• Six core partners: FIA Foundation, UNEP, IEA, ITF, ICCT and UC Davis.
• Financial support from FIA Foundation, GEF and European Commission
• Raises awareness, capacity builds in-country and produces research and data.
GFEI’s targets

50by50
Improve Light Duty Vehicle fuel economy by 50% by 2030 for new vehicles, and 2050 for all vehicles (2005 baseline)

35by35
Improve Heavy Duty Vehicle fuel consumption by 35% by 2035 for new vehicles (2015 baseline)
What can improved fuel economy deliver?

**Financial Savings**

$2 trillion savings

A total of $2 trillion could be made in fuel savings by 2025, $500 billion of which would fund the costs of initiating a transition to electric vehicles.

**Reduced dependence on oil**

**Lower carbon emissions**

**Air quality benefits**

From associated improved vehicle emissions standards

- **300 fewer power stations**
  
The 33Gt of CO₂ that could be saved between 2015 and 2050 is roughly the equivalent of closing 300 coal power stations over the same time period.
GFEI capacity-building workshops

Jamaica

Panama

Ukraine

ASEAN

South Africa

Colombia
Latest progress 2018

Myanmar – GFEI workshop September

Zambia – GFEI workshop August

Uganda – GFEI workshop August

Nepal - Sustainable Urban Mobility Forum
Latest progress 2018 (cont.)

Colombia – GFEI workshop January

Togo – GFEI workshop March

Malawi – GFEI workshop May

ASEAN Fuel Economy Platform - March
## Main fuel economy policy options

<table>
<thead>
<tr>
<th>Section</th>
<th>Policy Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEHICLE FUEL EFFICIENCY STANDARDS</td>
<td>• Introduce and regularly strengthen mandatory standards</td>
</tr>
<tr>
<td></td>
<td>• Establish and harmonize testing procedures for fuel efficiency measurement.</td>
</tr>
<tr>
<td>FISCAL MEASURES</td>
<td>• Fuel taxes and vehicle taxes to encourage the purchase of more fuel-efficient vehicles.</td>
</tr>
<tr>
<td></td>
<td>• Infrastructure support and incentive schemes for very fuel-efficient vehicles.</td>
</tr>
<tr>
<td>MARKET-BASED APPROACHES</td>
<td>• Voluntary programs such as U.S. SmartWay and other green freight programs</td>
</tr>
<tr>
<td>INFORMATION MEASURES</td>
<td>• Vehicle fuel economy labels</td>
</tr>
<tr>
<td></td>
<td>• Improving vehicle operational efficiency through eco-driving and other measures.</td>
</tr>
</tbody>
</table>

Source: ICCT
Examples of policies implemented

China – new rule on fuel economy standards, which includes mandate for Electric Vehicles (EVs)

Chile adopted a mandatory fuel economy labelling scheme from February 2013 becoming the first Latin American country to adopt such a scheme

Vietnam – fuel economy labels required on cars from January 1, 2018 and motorcycles from January 1, 2020

India – fuel economy standard effective from 2017
Results from fuel economy baselines

Baseline Light-Duty Vehicle Fuel Economy and Trends

Fuel economy trends

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OECD &amp; EU average</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>average fuel economy (Lge/100km)</td>
<td>8.8</td>
<td>8.2</td>
<td>7.8</td>
<td>7.6</td>
<td>7.4</td>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td>annual improvement rate (% per year)</td>
<td>-2.3%</td>
<td>-2.8%</td>
<td>-1.6%</td>
<td>-1.3%</td>
<td>-0.5%</td>
<td>-1.8%</td>
<td></td>
</tr>
<tr>
<td><strong>Non-OECD average</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>average fuel economy (Lge/100km)</td>
<td>8.5</td>
<td>8.5</td>
<td>8.4</td>
<td>8.2</td>
<td>8.0</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>annual improvement rate (% per year)</td>
<td>-0.1%</td>
<td>-0.3%</td>
<td>-1.4%</td>
<td>-1.2%</td>
<td>-1.6%</td>
<td>-0.8%</td>
<td></td>
</tr>
<tr>
<td><strong>Global average</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>average fuel economy (Lge/100km)</td>
<td>8.8</td>
<td>8.3</td>
<td>8.1</td>
<td>7.8</td>
<td>7.6</td>
<td>7.6</td>
<td>4.4</td>
</tr>
<tr>
<td>annual improvement rate (% per year)</td>
<td>-1.8%</td>
<td>-1.6%</td>
<td>-1.3%</td>
<td>-1.3%</td>
<td>-1.1%</td>
<td>-1.5%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GFEI target</th>
<th>required annual improvement rate (% per year)</th>
<th>2005 base year</th>
<th>-2.8%</th>
<th>2015 base year</th>
<th>-3.7%</th>
</tr>
</thead>
</table>

- Fuel economy is improving
- Slowing improvement in OECD countries
- Increasing improvement in non-OECD but not enough
- Still far from meeting the GFEI target
- New data in amid March
Global policy implementation progress

GFEI works with countries to develop a baseline analysis of vehicle trends and support policy proposals.

KEY
- New country
- Policy proposals developed
- Baseline completed
- Policy implemented
- G20 Transport group Participants: Australia, Brazil, Canada, China, the European Union, Germany, India, Italy, Japan, Mexico, Russia, United Kingdom and the United States.

GFEI LDV Fuel Economy Country Progress 2018

Africa
- Algeria
- Benin
- Botswana
- Egypt
- Ethiopia
- Ghana
- Ivory Coast
- Kenya
- Liberia
- Mali
- Mauritius
- Morocco
- Mozambique
- Nigeria
- Rwanda
- Senegal
- South Africa
- Tanzania
- Togo
- Tunisia
- Uganda
- Zambia
- Zimbabwe

Asia
- Australia
- Bangladesh
- China
- Fiji
- India
- Indonesia
- Malaysia
- Myanmar
- Nepal
- Philippines
- Sri Lanka
- Thailand
- Vietnam

North America
- United States
- Canada
- Mexico

Latin America and Caribbean
- Argentina
- Belize
- Brazil
- Chile
- Colombia
- Costa Rica
- Dominican Republic
- El Salvador
- Guatemala
- Honduras
- Jamaica
- Panama
- Paraguay
- Peru
- Uruguay

Eastern Europe and the Caucuses
- Georgia
- Macedonia
- Moldova
- Montenegro
- Russia
- Ukraine

Middle East and West Asia
- Bahrain
- Iran
- Jordan
- Kazakhstan
- Lebanon
- Mongolia
- Saudi Arabia
- Turkey
- UAE
We're committed to 50by50

Kazakhstan

PERU

Costa Rica

France

Jamaica

Dominican Republic
Supporting low-middle income and transitional countries

<table>
<thead>
<tr>
<th>Phase 1 – Pilot countries and tool development</th>
<th>Phase 2 – Regional Rollout</th>
<th>Phase 3 – Global Rollout</th>
<th>Pending Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>Mauritius</td>
<td>Nigeria</td>
<td>Angola</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Vietnam</td>
<td>Tanzania</td>
<td>Bhutan</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Thailand</td>
<td>Rwanda</td>
<td>Burkina Faso</td>
</tr>
<tr>
<td>Kenya</td>
<td>Georgia</td>
<td>Argentina</td>
<td>Cambodia</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>Kazakhstan</td>
<td>Jordan</td>
<td>Cameroon</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Mali</td>
<td>Brazil</td>
<td>Cape Verde</td>
</tr>
<tr>
<td>Peru</td>
<td>Togo</td>
<td>Colombia</td>
<td>D.R. Congo</td>
</tr>
<tr>
<td>Algeria</td>
<td>Panama</td>
<td>Bangladesh</td>
<td>Eritrea</td>
</tr>
<tr>
<td>Montenegro</td>
<td>Belize</td>
<td>Burundi</td>
<td>Guinea</td>
</tr>
<tr>
<td>Russia</td>
<td>Dominican Republic</td>
<td>South Africa</td>
<td>Pakistan</td>
</tr>
<tr>
<td>Jamaica</td>
<td>Djibouti</td>
<td>Mongolia</td>
<td>Kyrgyzstan</td>
</tr>
<tr>
<td>Macedonia</td>
<td>Guatemala</td>
<td>Fiji</td>
<td>Laos</td>
</tr>
<tr>
<td>Morocco</td>
<td>Moldova</td>
<td>Bolivia</td>
<td>Lesotho</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Iran</td>
<td>Ecuador</td>
<td>Marshall Islands</td>
</tr>
<tr>
<td>Tunisia</td>
<td>Barbados</td>
<td>Senegal</td>
<td>Oman</td>
</tr>
<tr>
<td>Benin</td>
<td>St. Lucia</td>
<td>Lebanon</td>
<td>Kuwait</td>
</tr>
<tr>
<td>Uruguay</td>
<td>Zambia</td>
<td></td>
<td>Niger</td>
</tr>
<tr>
<td>Nepal</td>
<td>Ghana</td>
<td></td>
<td>Tajikistan</td>
</tr>
<tr>
<td>Philippines</td>
<td>Malawi</td>
<td></td>
<td>Armenia</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Zimbabwe</td>
<td></td>
<td>Azerbaijan</td>
</tr>
</tbody>
</table>
Global Awareness: High Level Political Forum, New York
Global Awareness: Supporting the G20

Argentina meeting, September 2018 – attended by ICCT

WHAT IS THE TTG?

- A voluntary platform for G20 countries to share respective experience and work together to improve the energy and environmental performance of motor vehicles, especially HDVs.
- 14 participating economies: Argentina, Australia, Brazil, Canada, China, the EU (co-lead), Germany, India, Italy, Japan, Mexico, Russia, the United Kingdom, and the United States (co-lead).
- Two implementing organizations: International Council on Clean Transportation (ICCT); Global Fuel Economy Initiative (GFEI).
- Administered by the International Partnership for Energy Efficiency Cooperation (IPEEC).
Electric vehicles

- EVs are a pivotal technology for the transition of transport to clean energy
- EVs are already cost-competitive today in fleets with intensive usage and may achieve wider cost parity with ICEs as battery costs approach USD 100/kWh
- EVs are the best option available to fully comply with the GFEI target
- GFEI partners will integrate policies stimulating the adoption of EVs in their technical assistance and capacity building work
Heavy Duty Vehicles

Recommended target of 35% improvement in average fuel economy of HDVs globally by 2035. This would save:

- 9m barrels of oil per day by 2035
- 1-2 billion tonnes CO2 per year by 2035
- 25% each India and China

Working paper 14 by ICCT models future growth based on representative characteristics of 2015 EU, US, Brazil, India, and China fleets.
Conclusions of GFEI’s work to date:

- Fuel economy policies work
- Fuel economy can substantially reduce CO2 emissions
  – supporting the Paris Agreement and also reduces fossil fuel consumption and national expenditures on fossil fuels
- Multi-stakeholder and inter-government consultation processes are important
- Strong vehicle taxation is effective in encouraging more efficient vehicles
- Fuel-efficiency based taxation works well when this is linked to fuel economy labelling
- Review mechanisms for policies and impacts on the fleet are essential and adjust fiscal policies where necessary
Thank you to main funders

In-country partners
UN Climate Summit – GFEI named as a key ‘accelerator’

G20 Energy Efficiency Action Plan includes Fuel Efficiency - particularly HDVs

GFEI launches first review of international fuel economy

2011

2014

2015

Paris Climate Agreement at COP21

GFEI launches ‘100 for 50 by 50’

2016

GFEI named as climate ‘quick win’ at COP22

2017

GFEI launches ‘35 by 35’ target for Heavy Duty Vehicles

New focus on electric vehicles

2018

High-Level Political Forum on SDG7

G20 Transport Task Group meeting in Argentina

2019

GFEI’s Timeline
Next steps for GFEI 2.0

• Strategic review undertaken
• 2019 is GFEI’s 10th anniversary
• Re-launch at ITF congress in Leipzig – likely May 22nd
• Re-commitment of core partners
• New targets and detailed rationale from ICE to EV (and HDV )
• New advisory panel
• New strategic plan and offer to countries
• State of the World later in 2019
Thank you – see you in Leipzig!

www.globalfueleconomy.org