



# **International Energy Agency's Activities in Transport**

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# Topics

- 1. G8 Mandates**
- 2. Tires**
- 3. More efficient Components**
- 4. Other Analysis, Modeling, Policies**



## The G8 Mandate Gleneagles (July 2005)

The IEA shall...

- "encourage coordination of international policies on labeling, standard-setting and testing procedures for energy efficient appliances
- "seek improvements in the efficiency and environmental performance of products..."
- "review existing standards and codes for vehicle efficiency and identify best practice"

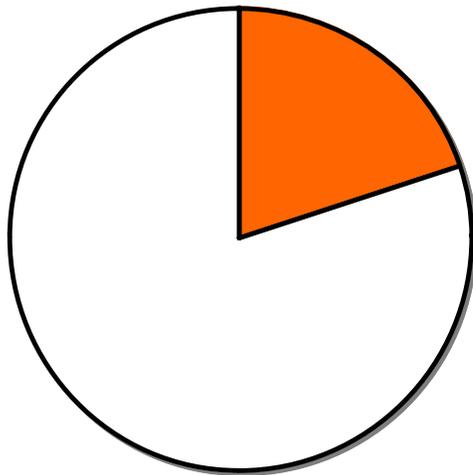
*Strong support from Director: Don't be timid*



# IEA Focus on Components

- **Understanding “off-test” fuel use**
  - ◆ Follows from ECMT study & own analyses
- **Fuel-efficient tires**
  - ◆ rolling resistance
  - ◆ Proper inflation
  - ◆ November workshop on tires (& components)
    - Huge increase in rolling resistance data
    - Some support for mandatory standards
    - Test procedure harmonization?
  - ◆ Recommendations to G8 for immediate action
- **More efficient components**
  - ◆ Tackling the 20% of fuel use that is “off-test”

## Fuel Consumption Not Fully Captured in Fuel Economy Test



## Components whose energy use is not captured in standard fuel economy test and possible efficiency improvements

System	Component Efficiency Improvements
Lighting	<ul style="list-style-type: none"> <li>• High efficiency lighting</li> </ul>
Air conditioning and climate controls	<ul style="list-style-type: none"> <li>• High <math>\eta</math> compressor</li> <li>• Insulated roofs, optically selective windows &amp; surfaces</li> <li>• Efficient fans &amp; controls</li> </ul>
Tires	<ul style="list-style-type: none"> <li>• Low rolling resistance</li> <li>• Precision pressure sensors</li> <li>• Self-inflation</li> </ul>
Driver feedback	<ul style="list-style-type: none"> <li>• Real-time display of fuel consumption</li> <li>• Shift-up indicator (manual transmission)</li> <li>• GPS tied to traffic and optimum route guidance</li> </ul>
Controls and electronics	<ul style="list-style-type: none"> <li>• High efficiency alternators</li> <li>• Customized control chips</li> <li>• Idle-off systems</li> </ul>
Lubricants	<ul style="list-style-type: none"> <li>• Synthetic oil</li> <li>• Higher performance transmission fluid</li> </ul>
Aerodynamics	<ul style="list-style-type: none"> <li>• Low-drag luggage, ski, bicycle racks</li> <li>• Drag-reducing spoilers and after-market products</li> </ul>
Standby power	<ul style="list-style-type: none"> <li>• Low-standby consumer electronics</li> </ul>
Pumps & fans	<ul style="list-style-type: none"> <li>• Higher <math>\eta</math></li> </ul>
Photovoltaic in roof	<ul style="list-style-type: none"> <li>• Supplement day-time electric use</li> <li>• Ventilate while parked</li> <li>• Battery re-charge</li> </ul>



# IEA's Efficient Component Strategy

- 1. Identify components whose efficiency can be improved**
- 2. Encourage international procedures to:**
  - a) Measure efficiency of key auto components**
  - b) Translate efficiency improvements to reductions in on-road fuel consumption**
- 3. Provide information to governments, manufacturers, consumers**
- 4. Coordinate research to further improve component efficiency**
  - IEA Implementing Agreements**



## Other IEA Transport Activities

- *Saving Oil in a Hurry*
- Modeling and Forecasting
  - ◆ World Energy Outlook (WEO)
  - ◆ ETP
  - ◆ Mobility Model
- Technology Collaboration (IEA Implementing Agreements)
  - ◆ Electric vehicles, batteries, materials



## Next Steps

- Next component?
- Workshops?
- Recommendations to G8?
- What to do about trucks?

**Your advice please!**