

Saving the Off-Test Fuel Use in Vehicles

Alan Meier

International Energy Agency

alan.meier@iea.org

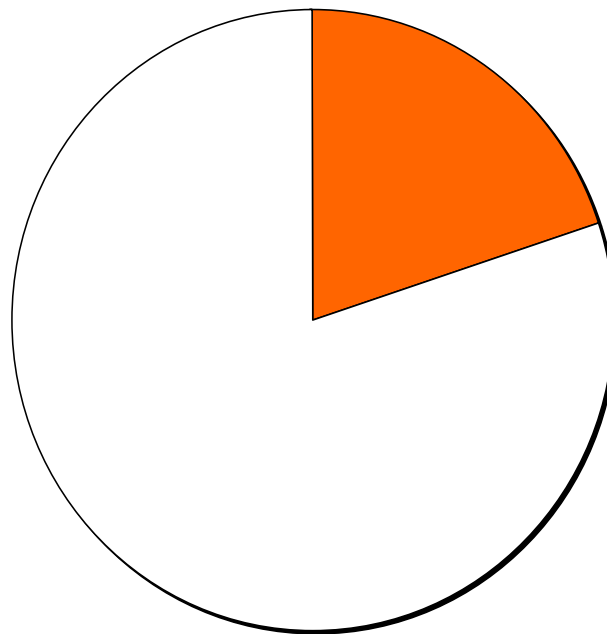
1. What is “off-test”?
2. How large is “off-test” and how much can be saved?
3. Policies to encourage savings



Some Aspects of a Car's Fuel Consumption are Not Captured in Tests

- **Dynamometer tests and adjustments cannot simulate all aspects of on-road performance**
- **Actual consumption depends on**
 - ◆ **usage patterns**
 - ◆ **aftermarket conditions**

Fuel Consumption Not Fully Captured in Fuel Economy Test



Fuel Consumption of Off-Test Components

Component	On-Road Fuel Use
HVAC (AC, heat, defrost, fans)	3 - 10%
Lights	3%
Tyres*	20%
Luggage carriers*	0 - 15%
Consumer electronics	?
Motors & pumps	?
Driver	???

* Mostly aftermarket



Potential Savings With More Efficient Components

Component	Fuel Savings*
Tires	0 - 5%
Lights	0 - 1%
Driver feedback	0 - 20%
AC System	0 - 5%

* Savings depend strongly on technology and driving conditions



Policies to Raise Component Efficiency

- Need research to ensure that these energy-saving technologies are understood
 - ◆ Verification of energy savings
 - ◆ Clear test procedures
 - ◆ International coordination
- Un-regulated aspects are open to other policies to encourage adoption



Policy Directions...

**A familiar
example of the
strategy of
endorsing high-
performance
components**



The First Step: An Energy Label?



Energi	
Mærke Model	Logo ABC 123
Lavt forbrug 	A
Højt forbrug Energiforbrug kWh/år <small>(i gennemsnit af årstiden)</small> XYZ	XYZ
Den tekniske energiforbrug afhænger af hvordan apparatet benyttes, og hvor det står.	
Førfang af kolerum liter Førfang af frostrum liter	xyz xyz
Lydeffektivitet dBA (50%)	xz
<small> Dette er en produktet information og ikke en garanti. </small>	
<small> Dato: 15. juli 2015 Side: 1 af 2 </small>	

Note: This is just an example to demonstrate the concept. Energy Star has no plans to create such a program.