



**Energy Efficiency Policies for the Southeast Asia Region  
Shangri-La Hotel (Java Room)  
11-12 December 2013**

**Regional cooperation on vehicle fuel economy standards**

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Thai Automotive Industry Association**

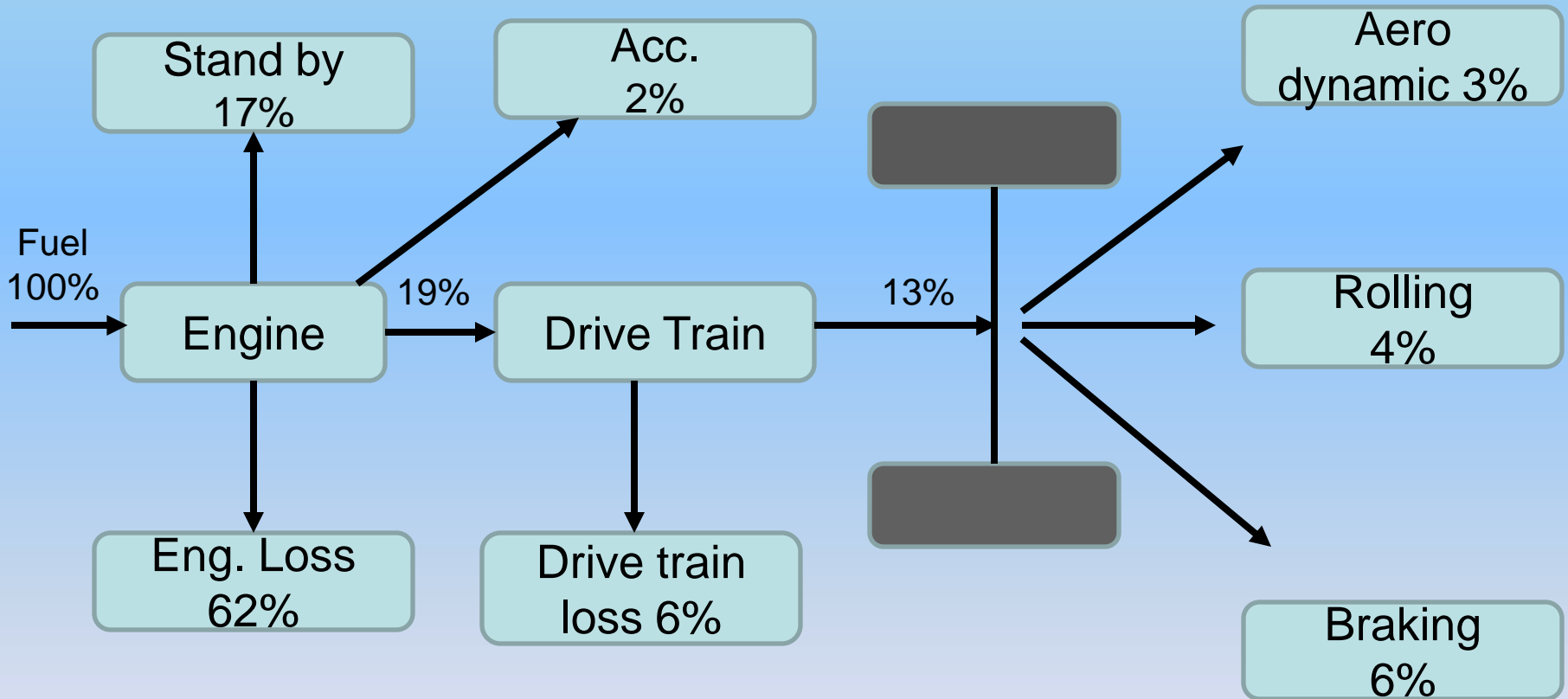


**Brunei**  
**Cambodia**  
**East Timor**  
**Indonesia**  
**Laos**  
**Malaysia**  
**Myanmar**  
**Philippines**  
**Singapore**  
**Thailand**  
**Vietnam**

Car Population  
 YTD OCT '13  
 4W = 3.7 Mil  
 2W = 9.5 Mil  
 AAF's report

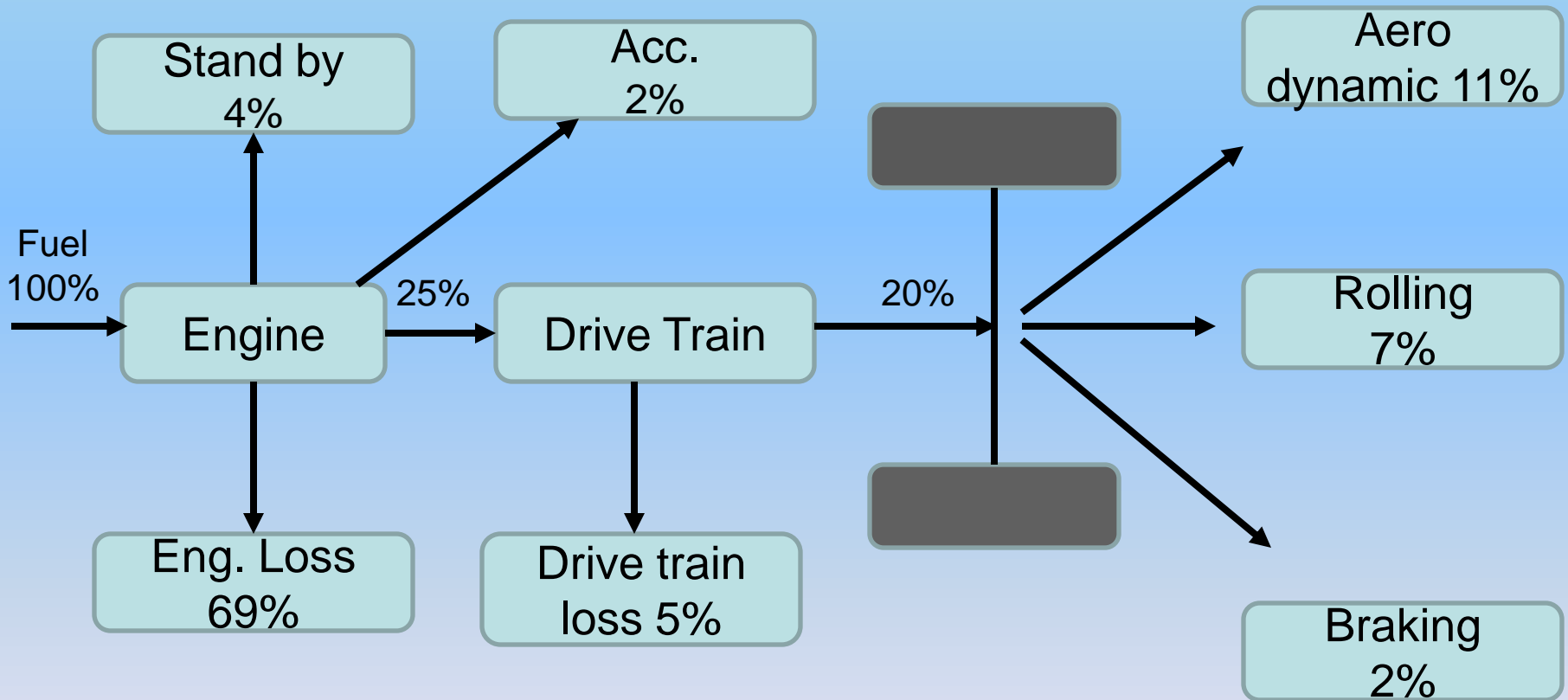
# Energy dissipation in city and highway driving (Image)

## Urban Driving



# Energy dissipation in city and highway driving (Image)

## Highway Driving



- **Vehicles standard by refer to the same international standard (ECE)**
- **More stringent on Emission standard (Euro Std)**
- **Consider on CO2 limit (ECE R 101 )**
- **Use MRA (Mutual Recognition Agreement) as tool for common understanding.**

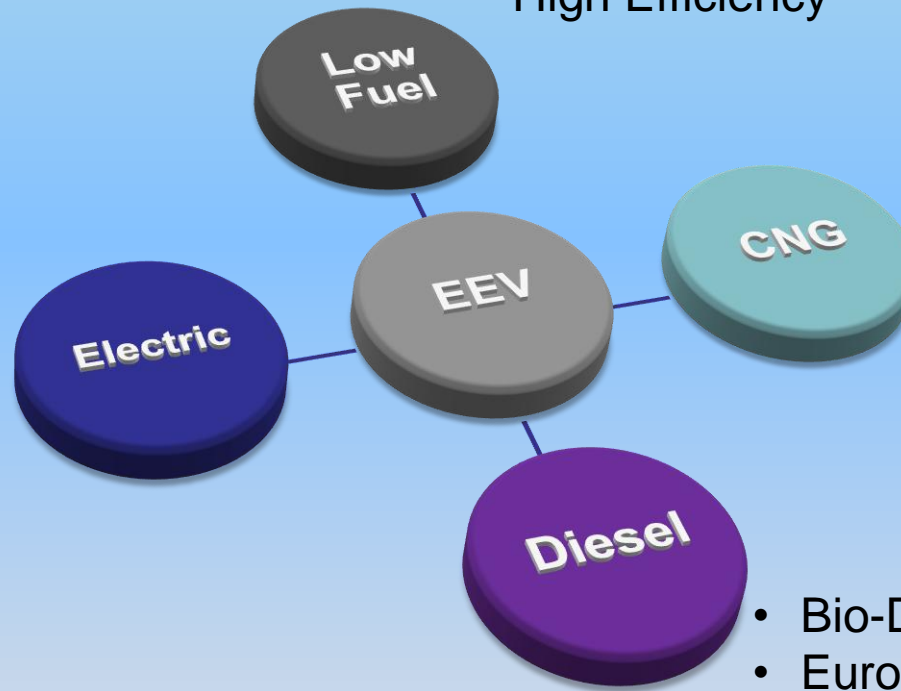
## Reduce usage of Fossil oil

- **Product improvement for more fuel efficiency, Durable Lighter greener and safer.**
- **More renewable fuel usage such as Ethanol and Biodiesel.**
- **More alternatives energy such as CNG , Biomass and co – generator.**
- **Considering for Hybrid vehicles and EV , HEV (Fuel cell).**
- **More green energy usage i.e. Solar Energy, Hydro , Wind etc.**

# ENERGY EFFICIENT VEHICLES (EEV)

- Low Fuel Consumption
- Low emissions
- High Efficiency

- EV
- PHEV
- Hybrids
- Fuel Cell



- Mono-Fuel
- Bi-Fuel
- CNG-DI

- Bio-Diesel B5
- Euro 4

- **EEV – FUEL EFFICIENCY AND CARBON EMISSION**
- **ACROSS ALL VEHICLE TYPES AND SEGMENTS**
- **CURB WEIGHT**

- Strengthen the dialogue between the auto-industry, petroleum industry, and the government regarding fuel policy/standard for the Euro 4.
- Maximum blending ratio of FAME up to B7 is acceptable subject for stringent quality control.
- Revised Bio-fuel specifications for Euro 4, and specifications for Euro 5 have been considered by AAF/TC3



	Euro 4 Emission		Euro 4 Fuels	
	timing	notes	fuel std.	notes
<u>Indonesia</u>	2017-	planned	no draft yet	planned, 2016 /17-
<u>Malaysia</u>	2016-	planned	issued	decided, 2015-
<u>Philippines</u>	2016-	planned	issued	planned, 2015-
<u>Singapore</u>	2014.04	decided, for gasoline	no fuel std.	gasoline, 2013.10- (Euro 5 diesel, 2013.07-)
<u>Thailand</u>	2012.11 2012.12	for diesel for gasoline	issued	already in the market
<u>Vietnam</u>	2017-	planned	no draft yet	planned, 2016-



**End of Presentation**