Effects of Eco-Driving

Many good things are described...

Contribution to Environmental Preservation
- Prevention of global warming
- Prevention of air pollution

...but it’s difficult to build up drivers’ enthusiasm

Implementation of Eco-driving

Improvement of Safety
- Reduction in traffic accidents

Improvement of Cost-effectiveness
- Saving of fuel costs
- Reduction in vehicle maintenance costs
General Perceptions on Eco-driving

1. **Drivers are not aware that they start/accelerate suddenly.**
   - Drivers have an awareness that they practice decent level of eco-driving.
   - Drivers think that further efforts will involve extraordinary driving operations.

2. **Eco-driving produces little energy saving effect.**
   - Almost everyone assumes an energy saving of approx. 5%.
   - Most drivers do not object to the promotion of eco-driving. However, they are hesitant to practice it themselves.

3. **Eco-driving depends on traffic environment and limits freedom of drivers.**
   - Drivers are afraid that disturbing traffic flow will be a nuisance to others.
   - Drivers attribute their inability to practice eco-driving to the performance of their cars or traffic environment.

**If the drivers’ perceptions are renewed,**
-> they can take a step closer to practicing eco-driving.
Eco- Driving for energy efficiency

Four Driving Modes

- We drive the vehicle with repeating 4 driving states (modes): start, cruise, deceleration, and stop.
(1) Start : Gentle Acceleration
“e-Start”

- The driving technic when you start is to lightly press the accelerator to move car “gently”.

  - Check the speedometer when you have counted “five” after starting. Try to reach a rough target speed of 20 km/h at this time.
  - When a revolution counter is provided, accelerate at around 1500 rpm.
  - When there is no revolution counter, press the accelerator using the engine sound as the reference.
  - It is good to start with the image that you are starting to drive on a snowy road.
(2) Cruise: Driving with Little Acceleration/Deceleration

[On general roads...]
• Rather than the traveling speed, be conscious of controlling the change in speed.
  – Don’t be over-concerned about traveling at a constant speed.
• Keep an appropriate distance between vehicles, while joining the flow of traffic.
  – Make gentle adjustments to the speed by accelerator control

[On the Highways...]
• When you are not in a hurry, keep your driving speed slower.
  – Increasing your speed by 10km/h results in an approximately 10% increase of fuel consumption.
(3) Deceleration: Releasing Your Foot from the Accelerator Early

- A running vehicle will continue to proceed due to cruising for some distance even after you release your foot from the accelerator. This allows your car to travel with less amount of fuel.

Release the accelerator

- When descending inclines, make use of engine braking. The supply of fuel may be stopped (fuel cut function).
(4) Stop : Idling Stop Operation

Outside of cities
- Stop time: 15.0%
- Percentage of idling stop time: 7.9%
- Percentage of idling stop time: 3.4%

Urban areas
- Stop time: 48.3%
- Percentage of idling stop time: 25.9%
- Percentage of idling stop time: 13.4%

(Reduced fuel consumption rate)