

## Manufacturing environmentally friendly products

For all of Isuzu product development initiatives, Isuzu upholds its principle of See Technologies, which guides us in perfecting technologies in the three fields of Safety, Economy, and the Environment.

Isuzu has identified the eight priority tasks in engineering environmentally friendly vehicles. Environmentally friendly products are under development across the divisions while individual special committees are set up for the respective tasks.



- [Improvement in fuel efficiency for CO2 reduction](#)
- [Reduction of environmentally hazardous substances](#)
- [Reduction of vehicle interior VOC](#)
- [Promotion of cleaner emissions](#)

### Improvement in fuel efficiency for CO2 reduction

#### Improvement in fuel efficiency in the latest models (FY2014)

---

The latest models of ELF and FORWARD for the Domestic market have enhanced their respective fuel economies by 10% and 5% at maximum (FY2015 heavy-duty vehicle fuel economy standard in Japan).

Improving fuel economy is effective in reducing the CO2 generated from fuel refining. Isuzu continues to promote activities toward the number one lowest fuel economy.

Item	ELF (equipped with an eco-stop system)	FORWARD (equipped with an eco-stop system)
CO2 reduction (converted value)	△10.8g (Equivalent to amount of CO2 absorbed by 14 cedars)	△15.0g (Equivalent to amount of CO2 absorbed by 25 cedars)
Heavy-duty vehicle fuel economy standard in Japan	+10%	+5%

\* ELF and FORWARD are a pet name in Japan

\* CO2 reduction amount: For 30 seconds of idling.

\* Frequency of eco-stop: ELF [150,000 times], FORWARD [120,000 times]

\* Amount of CO2 absorbed: Amount absorbed by cedar materials

\* Conversion coefficient: Referenced from "carbon dioxide emission examples by fuel (issued by Ministry of the Environment)" and "Forestry and Fisheries" data.

### **Reduction of environmentally hazardous substances (thorough practice of control of chemical substance contained in products)**

Isuzu thoroughly practices control of the chemical substances based on domestic and overseas chemical substance regulations including the European REACH regulations\* its changed constantly by using the IMDS (International Material Data System) to learn about the chemical substances contained in products.

\* European REACH regulations:

New chemical substance regulations from the European Union, effective since June 2007.

### **Reduction of vehicle interior VOC (Global announcement of VOC measures)**

The domestic vehicle interior VOC\* reduction activity has expanded to a global scale. In overseas markets, Isuzu offers products that have met the guideline values and specified substances designated by the Ministry of Health, Labor and Welfare.

The interior VOC reduction activity will be also further expanded to a global scale.

\* VOC (Volatile Organic Compounds):

Organic compounds that are highly volatile at room temperature/normal pressure such as formaldehyde and toluene. Exposure to high densities of these chemical substances can cause health problems such as nose or throat irritation or the so-called Sick Building Syndrome.

[Applicable models]



Pickup truck D-Max



SUV MU-X

### **Promotion of cleaner emissions**

Isuzu leads activities for cleaner emissions by reducing hazardous substances contained in emissions, such as NO<sub>x</sub>, SO<sub>x</sub>, and PM.

In FY2014, the GIGA, FORWARD, and ELF models with improved gas emissions met the Post New Long Term Emission regulation(Japan) and were released to Japanese market.

Isuzu continues its efforts in high-efficiency diesel engine development to offer models that conform with the latest emissions regulations.

### **Future Initiatives**

Isuzu will continue its efforts toward innovative environmental engineering to empower its development of environmentally friendly products.