

Domestic freight

Figure 1 Domestic freight transport in Japan is heavily dependent on road transport



Source: IGES stock image.

In 2010, 63% of all Japan's freight tonne-kilometres were by road, 33% by water, 4% by rail and 0.2% by air (EDMC, 2013). Except for rail transport, almost all other freight transport was powered by Internal Combustion Engines (ICEs; petrol or diesel engine) (Next Generation Vehicle Promotion Center, 2012 and 2014). All rail transport is electric. The total amount of goods-movement was 543 billion ton-km (EDMC, 2013). That equates to 4,244 ton-km per person in 2010 (see Figure 35). Domestic freight transport demand will be determined by the five society scenarios of the Low Carbon Navigator. In

addition, there are three levers: transport mode share, zero-emission vehicle penetration and biofuel blending rates for conventional fuels.

Level 1

For zero-emission vehicle penetration, 95% of all the road freight transport will be powered by ICEs, with the remaining 5% being HEVs. For biomass blending in ICE fuels, no biofuels will be used in 2050.

Level 2

For zero-emission vehicle penetration, all the road freight transport will be HEVs. For biomass blending in ICE fuels, 5% will be fuelled by biofuels.

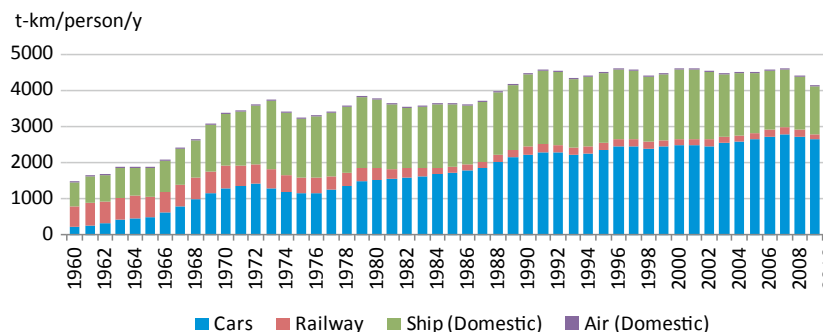
Level 3

For zero-emission vehicle penetration, 50% will be HEVs, 15% EVs and 35% FCVs. For biomass blending in ICE fuels, 10% will be fuelled by biofuels.

Level 4

For zero-emission vehicle penetration, FCVs will take over the market (100% share). For biomass blending in ICE fuels, 50% will be fuelled by biofuels.

Figure 2 Volume of domestic freight transport in Japan



Source: Data provided by NIES.