

# MOL Group's Environmental Data (As of March 31, 2016)

Energy Consumption	Unit	FY2013	FY2014	FY2015
Fuel oil (C oil)	thousand tons	5,895	5,837	5,631
MOL vessels	thousand tons	4,796	4,547	4,375
Group company vessels	thousand tons	1,099	1,290	1,256
Diesel oil (A oil)	thousand tons	108	157	312
MOL vessels	thousand tons	59	93	210
Group company vessels	thousand tons	49	64	102
Electricity	thousand kWh	92,672	107,383	99,294
Municipal gas	thousand m <sup>3</sup>	1,542	1,545	1,626
Energy consumption (equivalent)	thousand GJ	260,967	259,996	258,290

**C oil/A oil:** Used mainly for vessel fuel.

**Energy consumption:** The energy equivalent of heat originated from C oil, A oil, electricity, municipal gas and other energy consumed

Greenhouse Gas Emissions	Unit	FY2013	FY2014	FY2015
Scope 1: CO <sub>2</sub> emissions	thousand tons	18,860	18,803	18,676
MOL vessels	thousand tons	15,268	14,547	14,380
Group company vessels	thousand tons	3,569	4,216	4,229
Others	thousand tons	23	40	67
Scope 2: CO <sub>2</sub> emissions	thousand tons	53	62	56
Scope 3: CO <sub>2</sub> emissions	thousand tons	9,960	8,038	7,306

**Scope 1:** CO<sub>2</sub> emissions originating mainly from A oil and C oil used as fuel in vessels

**Scope 2:** CO<sub>2</sub> emissions originating mainly from electricity consumption

**Scope 3:** Estimated value of CO<sub>2</sub> emissions originating mainly from A oil and C oil used as fuel in vessels MOL has chartered out to other companies; calculated from FY2012

NOx and SOx Emissions	Unit	FY2013	FY2014	FY2015
NOx emissions	thousand tons	504	503	499
MOL vessels	thousand tons	408	389	385
Group company vessels	thousand tons	96	114	114
SOx emissions	thousand tons	332	335	319
MOL vessels	thousand tons	269	260	247
Group company vessels	thousand tons	63	75	72

Other Resources	Unit	FY2013	FY2014	FY2015
Waste	tons	135,597	114,576	180,983
Recycled	tons	134,601	113,940	179,974
Non-recycled	tons	995	637	1,009
Recycling rate (MOL Head Office Building)	%	67	66	64
Water	m <sup>3</sup>	721,574	637,694	632,174
Tap water	m <sup>3</sup>	721,574	637,694	632,174
River water	m <sup>3</sup>	-	-	-
Seawater tons (cyclic usage)	m <sup>3</sup>	-	-	-
Office paper	thousand sheets	77,887	72,075	65,873

**Waste:** Mainly vessels sold to be scrapped; recycled at scrapping yards

**Water:** The volume of water used in offices. Most of the water used in vessels is made from seawater and recycled.

Eco Sailing Initiatives	Unit	FY2013	FY2014	FY2015
Ocean-going vessels				
CO <sub>2</sub> emissions per unit load (ton-mile)	FY2009 = 100	91.4	85.9	83.3
MOL	FY2009 = 100	94.0	88.7	84.7
Domestic coastal vessels				
Unit energy consumption	FY2009 = 100	101.2	101.6	101.7

Onshore Initiatives	Unit	FY2013	FY2014	FY2015
Unit energy consumption (MOL, Daibiru, Shosen Koun)	FY2009 = 100	83.6	78.3	76.1
Solar power generation	thousand kWh	257	252	203

Data scope • MOL Group consolidated subsidiaries in Japan and overseas. Excludes some small offices  
• Noted areas such as "(MOL)" are limited to that scope

## Third-party Verification of CO<sub>2</sub> Emission Data

MOL acquired third-party verification by SGS Japan, Co., Ltd. to ensure the fairness, accuracy, and transparency of FY2015 CO<sub>2</sub> emission data included in this report. The verification was conducted based on ISO14064-3:2006.

Through the third party verification, we will identify issues and enhance our efforts to further reduce CO<sub>2</sub> emissions.

Verification target • Scope 1, 2 (energy originated carbon dioxide emissions) and Scope 3 (downstream leased assets).

