



## 2. Medium-Term Environmental Action Plan

Area	Program	Program objectives
<b>Energy conservation and global warming countermeasures</b>	Refinery energy conservation measures	Reduce energy unit consumption by 10% or more by 2010, against 1990 base year Effective energy conservation measures
	Depot energy conservation measures	Measuring and reducing actual fuel and electricity usage at depots
	Reduced fuel usage through more efficient ground transport	Increasing deliveries using 20kl+ capacity tank lorry to 75% or more Using NEU PLANET to promote shortest tank lorry delivery runs
	Reduced fuel usage through more efficient marine transport	Increasing size of domestic sea vessels and promoting most efficient routes
	Surveys and research on global warming gas emissions trading	Understanding past emissions trading results and participating in trading
	Collecting information on global warming activities and examining company measures	Examine group company responses to global warming issues, develop strategy
<b>Industrial waste and recycling measures</b>	Refinery waste disposal measures	Reduce final disposal of industrial waste by 67% or more by 2010, against 1990 base year Reuse, recycling of spent catalysts
	Waste disposal measures for operational sites, facilities and depots	Efforts to measure actual volume, recycle, and reduce
<b>Soil contamination countermeasures/ chemical agent management</b>	Soil contamination countermeasures	Soil contamination surveys at company owned service stations
	VOC measures: Installing gasoline tank inner floats	Carry out planned improvements of tanks based on open tank plans
	Management in accordance with PRTR Law	Reduction and measurement of amounts of designated agent emissions and transported volumes
	Developing and applying MSDS	Putting out final version
<b>Environmentally friendly products and services</b>	Sales of sulfur-free fuels	Promoting sales of sulfur-free fuels
	Development and promotion of environmentally friendly gasoline	Promoting use of the environmentally friendly, high-octane gasoline, Pura
	Solar batteries	Contributing to environment by promoting use of solar batteries
	Co-generation	Reducing CO2 by using high-efficiency on-site power generation
	Efforts to find practical uses for hydrogen/fuel cell systems	Demonstrations of hydrogen stations, fixed fuel cell systems
	GTL (gas-to-liquids) fuels	Promoting GTL as an environmentally friendly product
<b>Office environmental preservation</b>	Green purchasing (office supplies)	Preferential purchases of Eco Mark products
	Office Zero Emissions	Continued partial recovery, recycling efforts
	Office energy conservation	Maintaining office temperatures, conserving electricity
<b>Environmental management</b>	Development of environmental management system (MS)	Continuous improvements in environmental management system
	Continuous improvements in MS based on HSSE audit	Carry out service station, operational site, and depot audits, in addition to internal audits for each department
	Environmental cost measurement and analytical evaluation of results	Measure costs by department and item, assess and construct analytical evaluation methods
	Green purchasing	Establish structure for group companies' use of the Green Purchasing Guidelines and for cooperation with related companies Periodic checks to verify non-use of environmentally impacting substances in lubricants
	Continuous improvements in ISO14001 and new certification	Continuous improvements in ISO14001 (for already-certified companies, operational sites) Operational site, research laboratory ISO14001 certification
<b>Environmental contributions and communication</b>	Showa Shell Sekiyu Foundation for Promotion of Environmental Research	Support environment-related research, contribute to academic research
	Environmental magazine, <i>Quality</i>	Issue semi-annually; enhance the content
	Barrier-free service station	Make as barrier-free as possible at the time of new construction and remodeling
<b>Environmental risk and crisis management structures</b>	Disaster drill site	Increase variety of training courses and number of registrants
	Oil spill countermeasures	Convert all oil tankers to double hull structure
	Ship inspections: Domestic screening system	Build and utilize domestic vessel database
	Disaster response structure	Continue and periodically revise disaster response structure
		Develop and distribute Emergency Action Plan, revise as necessary Devise, maintain safety confirmation system
<b>Education</b>	HSSE seminar	Continue holding HSSE seminars
	Internal HSSE education	Implement departmental education according to departmental function

**The Showa Shell Group has developed a Medium-Term Environmental Action Plan based upon its environmental efforts in 2003 and 2004. The plan sets forth goals for each department and group company to achieve by 2007. Here, we present some of the details of the plan, as they relate to the Group overall.**

Reference page	2004 Accomplishments	2005 Goals
p31	Reduced group refinery total energy unit consumption by 14.0% from 1990 level	Further reduce energy unit consumption at group refineries
p30	Developed strategy for holding Refinery Cross-sectional Team Benchmark Workshop	Implementation based on Energy Conservation Master Plan
p26	Measured and reduced actual fuel and electricity usage	Measure and reduce actual fuel and electricity usage
p36	Increased deliveries using 20kl+ capacity tank lorry to 74.9%	Increase deliveries using 20kl+ capacity tank lorry to 75.9%
p36	Used NEU PLANET to chart shortest routes	Use NEU PLANET to chart shortest routes
p36	Average load of domestic sea vessels: 4,000 kl	Average load of domestic sea vessels: 4,030 kl
p30	Fact-finding survey: Participated in Clean Development Mechanism	Begin preparations for trial trading
—	Examined action plan for greenhouse gases at workshop (total 9 times)	Compile results of study of action plan into a report
p33	Reduced group refinery base by approximately 88% from 1990 levels	Continue reduction efforts at group refineries
p33	Group refineries reused, recycled 1,500 tonnes	Create 2006 plan for group recycling of spent catalysts
—	Continued actual measurement, recycling, reduction efforts	Continue actual measurement, recycling, reduction efforts
p37	Carried out screening surveys at 110 sites, boring surveys at 114 sites	Carry out screening surveys at 600 sites, boring surveys at 200 sites
p32	Implemented at one tank	Implement at two tanks
p35	Measured actual amounts of designated agent emissions and transported volumes	Measure actual amounts of designated agent emissions and transported volumes
p35	Revised contents completely and converted to JIS format	Immediate response to item changes in legal requirements
p25	Began production of sulfur-free gasoline/light oil	Begin sales of sulfur-free gasoline/diesel oil
p25	Expanded sales area (to 24 prefectures)	Examine expanding sales area and raising performance
—	Sold 4.3 MW	Sales of 4.5 MW
—	Constructed 118 MW power generation capacity	Constructed 132MW power generation capacity
p39	Continued hydrogen power demonstrations, started demonstrations of fixed fuel cell systems	Continue hydrogen power and fixed fuel cell system demonstrations
p39	Started test sales of GTL kerosene in December 2004	Start sales push limited to regional areas in winter 2005
p11	Preferential purchases of Eco Mark products	Preferential purchases of Eco Mark products
—	Continued partial recovery, recycling efforts	Continue partial recovery, recycling efforts
—	Maintained office temperatures, conserved electricity	Maintain office temperatures, conserve electricity
p12	Introduced Security Standards, Minimum Health Management Standards	Appoint HSSE manager at all Showa Shell branches and promote HSSE activities
p16	Carried out HSSE audits at 260 service stations, 10 operational sites, and 5 depots, as well as internal audits	Conduct HSSE audits at 124 service stations, 12 operational sites, 6 depots, as well as internal audits
p40	Measured cost by department and item, assessed analytical evaluation methods	Measure costs by department and item, assess analytical evaluation methods
p11	Requested cooperation with the Green Purchasing Guidelines from 15 consolidated subsidiaries	Request use and cooperation at 19 consolidated subsidiaries and other related companies
p11		Assess substances covered by RoHS; check every 3 months
p16	Continuous improvement of ISO14001	Continuous improvement of ISO14001
p16	Prepared for certification at Nippon Grease, Yokohama Blending Plants and Kobe Blending Plants	Certification achieved at Nippon Grease, Yokohama Blending Plants and Kobe Blending Plants
p52	Supported 54 projects at a cost of ¥30.15 million	Support 50 projects at a cost of ¥30 million
p57	Did not publish	Issue once a year
p56	Made 12 service stations barrier-free	Make as barrier-free as possible at the time of new construction and remodeling
p19	Held new Tanker Truck Course, 188 attendees	Held 17 times, over 120 attendees
p20	One of the among time-charter crude oil tankers is not yet double hull	Complete double hull construction of all time-charter crude oil tankers
p36	Approximately 700 domestic vessels input into database	Nearly 100% (approximately 1,100) of domestic vessels input into database
p18	Continued and revised response structure	Continue and revise response structure
—	Examined development of emergency action plan	Develop, distribute emergency action plan
p18	Examined development of employee safety confirmation system	Develop employee safety confirmation system
—	Held once a year (39 attendees)	Hold once a year (approximately 50 attendees)
—	Implemented departmental education according to departmental function	Implement departmental education according to departmental function