

# Measures of the Fourth Environmental Action Plan

## Preventing Global Warming, Recycling Resources, Reducing Environment-impacting Substances and Environmental Management

Theme	Function	Action policy	Actions and targets																																	
1. Preventing global warming	Management	1) Develop framework for reducing CO <sub>2</sub> emissions	· Draft and implement a medium- to long-term plan for reducing CO <sub>2</sub> emissions in all businesses worldwide																																	
	Products	2) Promote product development to conserve energy and reduce CO <sub>2</sub> emissions	· Promote technological development that raises transmission efficiency and reduces weight for improved fuel efficiency in automobiles · Promote energy conservation with GHPs, shower-toilets and other life related products · Develop fuel cells and other ecological energy related products · Promote product and technological development for devices for fuel cell vehicles and future clean energy vehicles · Quantify and reduce CO <sub>2</sub> emissions within the life cycle of every product																																	
		3) Sell environmentally friendly products	· Sell fuel cells and other new ecological energy related products																																	
	Production and logistics	4) Promote activities to reduce greenhouse gas emissions in production and logistics	<p>&lt;Energy sources&gt;</p> <ul style="list-style-type: none"> <li>· Reduce CO<sub>2</sub> emissions by minimizing energy loss</li> <li>· Reduce CO<sub>2</sub> emissions through installation of renewable energy systems, e.g., solar and wind power generation</li> <li>· Reduce CO<sub>2</sub> emissions through <i>mono-zukuri</i> innovations that raise production efficiency</li> </ul> <p>&lt;Other than energy sources&gt;</p> <ul style="list-style-type: none"> <li>· Reduce emissions of greenhouse gases produced during casting process (SF<sub>6</sub><sup>*1</sup>)</li> </ul> <p>&lt;Logistics&gt;</p> <ul style="list-style-type: none"> <li>· Optimize logistics by streamlining delivery locations and loads</li> </ul> <table border="1"> <thead> <tr> <th colspan="4">[CO<sub>2</sub>]</th> </tr> <tr> <th></th> <th>Location</th> <th>Item</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Production</td> <td>Global</td> <td>Shift to target management by fiscal 2007</td> <td></td> </tr> <tr> <td rowspan="2">Domestic subsidiaries</td> <td>Emissions volume/sales unit</td> <td>20% reduction from fiscal 2002</td> </tr> <tr> <td>Aisin Seiki</td> <td>Emissions volume/sales unit</td> <td>25% reduction from fiscal 1991</td> </tr> <tr> <td>Overseas subsidiaries</td> <td>· Promote maximum reduction in all countries · Quantify each area Shift to target management by fiscal 2007</td> <td></td> </tr> <tr> <td>Logistics</td> <td>Aisin Seiki</td> <td>Emissions volume/sales unit</td> <td>25% reduction from fiscal 2000</td> </tr> </tbody> </table> <p>[SF<sub>6</sub>, HFC<sup>*2</sup>]</p> <table border="1"> <thead> <tr> <th></th> <th>Location</th> <th>Item</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td>Production</td> <td>Aisin Seiki</td> <td>Emissions volume</td> <td>85% reduction from fiscal 2004</td> </tr> </tbody> </table>	[CO <sub>2</sub> ]					Location	Item	Target	Production	Global	Shift to target management by fiscal 2007		Domestic subsidiaries	Emissions volume/sales unit	20% reduction from fiscal 2002	Aisin Seiki	Emissions volume/sales unit	25% reduction from fiscal 1991	Overseas subsidiaries	· Promote maximum reduction in all countries · Quantify each area Shift to target management by fiscal 2007		Logistics	Aisin Seiki	Emissions volume/sales unit	25% reduction from fiscal 2000		Location	Item	Target	Production	Aisin Seiki	Emissions volume	85% reduction from fiscal 2004
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5) Promote activities to reduce CO <sub>2</sub> emissions in indirect operations	· Replace existing Group fleet with low-emissions vehicles and enforce fuel-saving driving · Expand number of low CO <sub>2</sub> -emitting offices through installation of renewable energy systems																																			
Management	6) Develop framework for recycling resources	· Draft and implement a medium- to long-term plan for reducing emissions in all businesses worldwide · Study methods of reuse and recycling to secure mineral resources																																		
Products	7) Develop products that contribute to reduced resource consumption	· Augment designs to improve recyclability of automotive parts · Promote use of materials that reduce product weight and minimize resource waste																																		
	8) Promote product recycling	· Initiate and expand integrated recycling for energy related products																																		
Production	9) Promote activities to recycle resources in production and logistics	<p>&lt;Raw materials&gt;</p> <ul style="list-style-type: none"> <li>· Raise resource productivity with improved yields</li> <li>· Establish methodology for analyzing resource losses for improved productivity</li> <li>· Continue zero landfill waste policy (under 1% for domestic subsidiaries vs fiscal 2001 level)</li> </ul> <p>&lt;Water resources&gt;</p> <ul style="list-style-type: none"> <li>· Reuse waste water and minimize water consumption to reduce impact on local environment</li> </ul> <p>&lt;Packing&gt;</p> <ul style="list-style-type: none"> <li>· Reduce packing material usage volume by minimizing use and widening use of returnable containers</li> </ul> <table border="1"> <thead> <tr> <th colspan="5">[Resource Recycling]</th> </tr> <tr> <th></th> <th>Location</th> <th>Target</th> <th>Item</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Production</td> <td rowspan="2">Domestic subsidiaries</td> <td>Waste</td> <td>Emissions volume/sales unit</td> <td>10% reduction from fiscal 2004</td> </tr> <tr> <td>Aisin Seiki</td> <td>Waste</td> <td>Emissions volume/sales unit</td> <td>5% reduction from fiscal 2004</td> </tr> <tr> <td>Overseas subsidiaries</td> <td>Waste</td> <td>· Promote maximum reduction in all countries · Quantify each area</td> <td></td> </tr> <tr> <td>Logistics</td> <td>Aisin Seiki</td> <td>Packing materials</td> <td>Usage volume/sales unit</td> <td>55% reduction from fiscal 2000</td> </tr> </tbody> </table>	[Resource Recycling]						Location	Target	Item	Target	Production	Domestic subsidiaries	Waste	Emissions volume/sales unit	10% reduction from fiscal 2004	Aisin Seiki	Waste	Emissions volume/sales unit	5% reduction from fiscal 2004	Overseas subsidiaries	Waste	· Promote maximum reduction in all countries · Quantify each area		Logistics	Aisin Seiki	Packing materials	Usage volume/sales unit	55% reduction from fiscal 2000						
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10) Promote activities to recycle resources in indirect operations	· Establish and meet waste reduction targets based on quantitative waste data																																			

Theme	Functions	Action policy	Actions and targets																												
3. Reducing environment-impacting substances	Management	11) Create framework for managing environment-impacting substances	· Bolster structure for monitoring regulations for environment-impacting substances in all countries · Strengthen SOC <sup>*3</sup> assurance structure at the development stage																												
	Products	12) Promote management and reduction of environment-impacting substances in products	· Totally eliminate environment-impacting substances in products (lead, mercury, cadmium and hexavalent chromium, and excluding products not targeted)																												
	Production	13) Promote management and reduction of environment-impacting substances in production	<p>· Draft and implement reduction and replacement plan based on harmfulness of individual environment-impacting substances</p> <table border="1"> <thead> <tr> <th colspan="5">[Environment-impacting Substances]</th> </tr> <tr> <th></th> <th>Location</th> <th>Target</th> <th>Item</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Production</td> <td rowspan="2">Domestic subsidiaries</td> <td>PRTR<sup>*4</sup> volume</td> <td>Emissions volume</td> <td>75% reduction from fiscal 2001</td> </tr> <tr> <td>VOC<sup>*5</sup> volume</td> <td>Emissions volume</td> <td>30% reduction from fiscal 2004</td> </tr> <tr> <td rowspan="2">Aisin Seiki</td> <td>PRTR volume</td> <td>Emissions volume</td> <td>55% reduction from fiscal 1999</td> </tr> <tr> <td>VOC volume</td> <td>Emissions volume</td> <td>03% reduction from fiscal 2004</td> </tr> <tr> <td>Overseas subsidiaries</td> <td>· Promote maximum reduction in all countries · Quantify each area</td> <td></td> <td></td> </tr> </tbody> </table> <p>· Assess soil pollution level at all locations</p>	[Environment-impacting Substances]						Location	Target	Item	Target	Production	Domestic subsidiaries	PRTR <sup>*4</sup> volume	Emissions volume	75% reduction from fiscal 2001	VOC <sup>*5</sup> volume	Emissions volume	30% reduction from fiscal 2004	Aisin Seiki	PRTR volume	Emissions volume	55% reduction from fiscal 1999	VOC volume	Emissions volume	03% reduction from fiscal 2004	Overseas subsidiaries	· Promote maximum reduction in all countries · Quantify each area	
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4. Environmental management	Products	14) Create structure for ecological product development and design	· Establish and expand structure for implementing product LCA <sup>*6</sup> for environmental assessment in development and design stages · Establish and implement comprehensive assessment index for product functionality and environmental load																												
	Production	15) Augment green purchasing	· Ensure thorough monitoring and assessment based on green purchasing standards · Expand number of products procured through green purchasing																												
		16) Promote further activities to incorporate environmental measures from planning stage	· Construct ecological plants that minimize environmental impact from planning stage and promote such concepts among all consolidated subsidiaries																												
	Communications	17) Conduct environmental communications for a broad base of stakeholders	· Communicate with local communities through factory tours, environmental volunteering, environmental classes and various events for children · Expand content on environmental, social and financial issues in sustainability reports · Actively disclose environmental information using product brochures, events and the Internet																												
		18) Further promote nature and environmental conservation activities	· Promote a layout in plant and office design that blends with nature and greenery · Expand environmental conservation activities in cooperation with local communities and overseas consolidated subsidiaries																												
	Management	19) Refine environmental management procedures	· Establish assessment methods and set goals for environmental management by employing environmental management index and improved environmental accounting procedures																												
		20) Promote measures to raise environmental awareness among employees	· Implement environmental education to the level where employees can explain AISIN environmental measures to customers · Promote education activities in relation to environmental month · Initiate and broaden more than one particular environmental activity among all employees																												
21) Further promote activities with consolidated subsidiaries and suppliers		<p>· Expand activities in cooperation with AISIN consolidated environmental management subsidiaries and suppliers</p> <p>· Promote environmental management systems among all offices and consolidated subsidiaries</p> <p>[Production companies] [Non-production companies]</p> <p>· Promote structure for ecological product development and design</p> <p>· Further promote environmental performance on a consolidated basis</p> <p>[Suppliers]</p> <p>· Manage entire supply chain to totally eliminate environment-impacting substances in materials and components received from suppliers</p> <p>· Improve environmental performance in the entire supply chain by supporting the introduction and expansion of environmental management system among suppliers</p> <p>[Sales outlets]</p> <p>· Optimally manage such materials as waste, waste water and chlorofluorocarbons (CFCs) among sales outlets</p>																													

Note: Numerical targets are based on business plans current as of the publishing of this report. Future changes in business plans may result in revisions of the targets.

Note: Targets to be achieved for each fiscal year are determined annually by the Environmental Committee and are disclosed in sustainability reports.

\*1 SF<sub>6</sub> (Sulphur Hexafluoride): Colorless, odorless and nonflammable, SF<sub>6</sub> is a gaseous insulator with excellent electrical insulation and arc extinguishing properties. SF<sub>6</sub> is targeted, however, as a gas for reduced use in order to prevent global warming because of its long lifespan in the atmosphere and a global warming potential value of 23,900.

\*2 HFC (Hydrofluorocarbon): An excellent alternative for fluorine and chlorofluorocarbons (CFCs) that is used as a replacement for fluorine because it does not contain ozone-destroying chlorine

\*3 SOC (Substances of Environmental Concern): Substances that impact the environment

\*4 PRTR (Pollutant Release and Transfer Register): A system for reporting the discharge and flow volume of chemical substances legally recognized as having an environmental impact

\*5 VOC (Volatile Organic Compounds): Chiefly refers to manmade synthetic substances that can easily be released into the atmosphere at room temperature and under normal pressure. Toluene and xylene are representative VOC substances, although there are over 100 other substances within this category.

\*6 LCA (Life Cycle Assessment): A method for comprehensively, scientifically, quantitatively and objectively assessing the total environmental impact and load during the production, use and disposal of products. Environmental impact and load is influenced by such factors as resource and energy consumption and emission of environmentally harmful substances and waste.