The Fifth Toyota Auto Body Action Plan (FY 2011-1015)

◆FY2015 Efforts and Results

<table>
<tr><th colspan="2"></th><th>Action items</th><th>Main Efforts and Results</th></tr>
<tr><td rowspan="5">Efforts to build a low-carbon society</td><td rowspan="2">Development and Design</td><td>①Promote development of next-generation vehicles that use electrical energy</td><td>·EV: The Super-Compact EV COMS went on sale in July of 2012 and it achieved cumulative sales of 4,700 COMS.(End of March, 2016)
·HV: Alphard, Vellfire, Voxy, Noah, Esquire, Estima and Prius were sold and in 2015, we sold 112,000 HV and have cumulative sales of 1,637,000 vehicles.(End of March, 2016)</td></tr>
<tr><td>②Develop and commercialize lightweight technology for improving vehicle fuel efficiency</td><td>·Program: Activities for developing weight reduction technologies, applying them to products, and reducing weights in development projects
·Result: Achieved the development project weight reduction target.</td></tr>
<tr><td rowspan="2">Production and Logistics</td><td>③Reduce greenhouse gas emissions volume and enhance energy-saving activities in production activities</td><td><Main CO_2 Reduction Measures)
·Promoted thoroughly shutting down equipment during hours of non-operation
·Saved energy through renovations of painting booths
<table>
<tr><th>Area</th><th>Item</th><th>Base year</th><th>Target (FY2015)</th><th>FY2015 Performance</th></tr>
<tr><td rowspan="3">Toyota Auto Body</td><td>CO_2 emissions volume</td><td>FY1990</td><td>5% reduction</td><td>3% increase</td></tr>
<tr><td>CO_2 emissions volume per vehicle</td><td>FY2001</td><td>10% reduction</td><td>17% reduction</td></tr>
<tr><td>Global</td><td>CO_2 emissions volume per vehicle</td><td>FY2001</td><td>10% reduction</td><td>22% reduction</td></tr>
</table></td></tr>
<tr><td>④Pursue shipping efficiency in logistics activities and reduce CO_2 emissions volume</td><td>·Implemented CO_2 reduction activities by optimizing transportation routes and load capacity efficiency in shipping
<table>
<tr><th>Item</th><th>Base year</th><th>Target (FY2015)</th><th>FY2015 Performance</th></tr>
<tr><td>CO_2 emissions volume in logistics</td><td>FY2001</td><td>36% reduction</td><td>42% reduction</td></tr>
</table></td></tr>
<tr><td rowspan="3">Efforts toward building a recycle-oriented society</td><td>Development and Design</td><td>⑤Further introduce and promote recycle design that considers effective resource use</td><td>·Started program for evaluation using 2 disassembly methods (nibbler, manual disassembly) according to the market conditions
(Set and worked to achieve disassembly time targets: Nibbler = 21 minutes or less, Manual disassembly = Time required for previous vehicle or less.)
·Implemented parts selection and considered application for use of market discarded resins</td></tr>
<tr><td>Production and Logistics</td><td>⑥Effectively use resources and reduce emissions in production and logistics activities</td><td><Emissions>
·Reduction of paint waste and wastewater sludge in production activities
<table>
<tr><th colspan="2">Item</th><th>Base year</th><th>Target (FY2015)</th><th>FY2015 Performance</th></tr>
<tr><td>Waste substances</td><td>Emissions volume per vehicle</td><td>FY2008</td><td>5% reduction</td><td>17% reduction</td></tr>
</table>
[·Valuable materials: metal scrap (stamping waste materials, etc.) for fee-payable recycling
·Waste substances: money back recycling, incineration of waste, and landfill waste substances]
<Logistics>
·Reduced packaging material use by continuing to use things such as packaging and shipping specification bubble wrap (aircap) materials.
<table>
<tr><th>Item</th><th>Base year</th><th>Target(FY2015)</th><th>Fy2015 Performance</th></tr>
<tr><td>Volume of packaging and wrapping materials used</td><td>FY2001</td><td>47% reduction</td><td>56% reduction</td></tr>
</table></td></tr>
<tr><td>Coordinating With Society</td><td>⑦Promote new businesses to invest in building a recycle-oriented society</td><td>·Developed TABWD*1 flame retardant injection molding material using cedar from woodland thinning as reinforcement fiber. It is used in the wiring harness protectors of Alphard and Vellfire hybrids.</td></tr>
<tr><td rowspan="4">Promoting environmental conservation and building a society that coexists with nature</td><td>Development and Design</td><td>⑧Soundly manage chemical substances in products</td><td>·Conformed to new material restrictions in each country. Japan: Deca-BDE restriction of the Chemical Substance Control Act (TMC Policy is for changeover by May 2017.)
→ Completed investigation of parts containing the substance (old-model parts). Will complete changeover by TMC policy deadline.
·Carried out management for material restrictions
(1) Carried out chemical substance management for new vehicle parts and materials.
→ No restricted substances are used.
(2) Conducted audit activities for environmental impact substances (10 substances) in mass production vehicle products.
→ No problems were found.
·Constructed a system for management of overseas subsidiaries.
→ Conducted preparation for IMDS registration training of local responsible staff.</td></tr>
<tr><td>Production</td><td>⑨Reduce SOCs in production activities</td><td>·Improved paint sticking efficiency in paint process, and reduced VOC by reducing the amount of paint and cleaning thinner and other measures.
<table>
<tr><th colspan="2">Item</th><th>Base year</th><th>Target(FY2015)</th><th>FY2015 Performance</th></tr>
<tr><td>Body paint VOCs</td><td>Emissions volume per painted vehicle unit area</td><td>FY1998</td><td>68% reduction</td><td>73% reduction</td></tr>
</table></td></tr>
<tr><td rowspan="2">Coordinating With Society</td><td>⑩Make efforts for biodiversity</td><td>·Held environmental workshops using the biotope and other resources of Fure-Ai Park for members of the local community, nearby elementary schools, kindergartens, and employees (August and September). The park is also used as a place for instruction in environmental preservation techniques and for research presentations.</td></tr>
<tr><td>⑪Promote social contribution activities to invest in building coexistence with nature</td><td>·Enhanced forest creation activities ･･･Toyota Auto Body Group companies thinned 32 hectares of Aichi Prefectural forest areas (732trees)
·Succeeded in training 3 leaders during FY 2015 as we work to make the activity independent.</td></tr>
<tr><td rowspan="8">Environmental management</td><td rowspan="8">Management</td><td>⑫Promote and enhance consolidated environmental management</td><td>·Enhanced cross-development activities and information sharing through periodic liaison meetings (1/M) with overseas operations</td></tr>
<tr><td>⑬Promote further coordinated environmental activities with suppliers</td><td>·Assured use of raw material sub-materials not included in Toyota's Prohibited Substances by thoroughly managing such chemical substances
·Implemented activities for demanding items for observing environmental conservation and also activities for understanding for construction companies</td></tr>
<tr><td>⑭Promote global CO_2 management</td><td>·Created a collection of energy-saving improvement case studies.
·Conducted on-site audits of and provided support for energy-saving activities.</td></tr>
<tr><td>⑮Reduce life-cycle burden on the environment through active planning toward Toyota ECO-VAS</td><td>·Implemented environmental assessment (ECO-VAS) with cooperation of Toyota Motor Corporation for vehicle model changes and new models</td></tr>
<tr><td>⑯Promote sustainable plant activities</td><td>·Headquarters, and Fujimatsu Plant: Opened the Kariya Fure-Ai Park to the local community and used it for environmental workshops and other purposes.
·Inabe Plant: Used Relaxation Area for Interaction with Nature for monozukuri (manufacturing) experiences and other purposes.
·Yoshiwara Plant: Constructed the Yamaboshi Park (space for convenient interaction with the local community).</td></tr>
<tr><td>⑰Promote and achieve environment education</td><td>·Implemented environmental e-learning (June) and also stratified education</td></tr>
<tr><td>⑱Achieve active disclosure of environmental information and communication activities</td><td>·Issued CSR Report (Uploaded to our official homepage on June 11)
·Held Community Social Gatherings at the Fujimatsu, Inabe, and Yoshiwara Plants.</td></tr>
</table>

Fifth Toyota Auto Body Environmental Action Plan – Database

< >: Target value

Category	Item			Units	Reference year	2011	2012	2013	2014	2015
Building a low-carbon society	Reduction in production CO2 emissions	Toyota Auto Body	(1) Total emissions	(Thousands tons CO2)	201 (1990)	208	219	219	213	196 ＜191＞
			(2) Amount absorbed by forests*	(Thousands tons CO2)	0	▲ 3.4	▲ 3.9	▲ 4.5	▲ 5.1	▲ 5.7
			Net result [(1) – (2)]	(Thousands tons CO2)	201	204.6	215.1	214.5	207.9	190.3
			Unit emissions	(CO2 kg/vehicle)	317 (2001)	281	274	285	289	264 ＜285＞
		Global	Unit emissions	(CO2 kg/vehicle)	328 (2001)	279	265	271	261	255 ＜315＞
	CO2 emissions volume in logistics		Total emissions	(Thousands tons CO2)	9.9 (2001)	6.1	5.9	6.0	6.1	5.7 ＜6.3＞
Building a recyclingoriented society	Reduction in waste materials		Unit emissions	(kg/vehicle)	15.4 (2001)	13.2	12.9	14.3	13.1	12.8 ＜14.7＞
	Volume of packaging and wrapping materials used		Total emissions	tons	2.3 (2001)	1.3	1.2	1.2	1.1	1.0 ＜2.1＞
Building a society that lives in harmony with nature	Reduction in body VOC emissions		Unit emissions	g/m2	100 (2001)	33	32	30	26	27.5 ＜32＞

＊Value calculated by an outside manufacturer based on data concerning tree planting and woodland thinning activities conducted by Toyota Auto Body in Japan and overseas.