



Life is Built on Trust.

Environmental Report 2018

DAITO KENTAKU GROUP





The Daito Group – Business Overview



6. Creation: We develop proposals for creating people-friendly living environments, and we provide services that contribute to reducing the burden placed on the environment.

Corporate Philosophy

effective use of limited land."

Our Promise (CSR Action Policy)

gain a sense of satisfaction through their challenges.

helping to realize a post-carbon society.

Basic Environmental Policy

living environment.

Environmental Action Policy

value that lasts for generations.

human relationships.

anticipating social changes.

promoting resource recycling.

they consume.

this compliance in our business activities.

taking steps to expand the reuse of materials.

the lead in undertaking environmentally-friendly activities.

To our owners

To our tenants -

As employees

Nursery School Businesses Other Businesses (Financial Businesses)

Overseas Business

 Daito Kentaku Health Insurance Association
 DAITO ASIA DEVELOPMENT PTE. LTD •DAITO ASIA DEVELOPMENT (MALASIA) I SDN. BHD
•DAITO ASIA DEVELOPMENT (MALASIA) II SDN. BHD DAITO ASIA INVESTMENT PTE. LTD
 D.T.C. REINSHURANCE LIMITED
 Daito Kentaku USA, LLC

Top Message



With an enhanced awareness of the importance of being environmentally-friendly, we are using our business activities to contribute towards solving social problems on a global scale.

Naomi Kumakiri、熊切直美 President and Representative Director (CEO), Daito Trust

Addressing environmental issues is one of our Group's obligations

Over the past few years, abnormal weather conditions resulting from climate change have had a serious impact throughout the world, and represent a problem for all of humanity. With regard to the reduction of greenhouse gas emissions, which are generally believed to one of the main causes of climate change, in December 2015 the Paris Agreement on Climate Change was adopted at the 21st Yearly Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21). As a result, serious efforts are now being made to reduce greenhouse gas emissions, and governments and business enterprises are being expected to take steps to reduce their environmental footprint in various ways. In our three main business areas - Construction Business, Real Estate Business, and Other Businesses - the Daito Group uses a considerable quantity of energy resources. We are also a company that generates construction-related industrial waste, and so we have made the reduction of our environmental footprint an integral part of our business activities.

Working towards the realization of a sustainable society

In line with the Greenhouse Gas Reduction Target (Overall Target) specified in the Plan for Global Warming Countermeasures that was approved by Japan's Cabinet in response to the signing of the Paris Agreement on Climate Change, the Daito Group has committed itself to a medium-term target of reducing the Group's greenhouse gas emissions volume (Scope1+2+3) by 26% (compared to the emissions volume in FY 2013) by FY 2030. Besides setting an overall, national target of 26%, the Plan for Global Warming Countermeasures also sets sectoral greenhouse gas reduction targets (for the Industrial, Transport, Commercial, Residential and Energy Conversion sectors), with companies in each sector being expected to implement appropriate measures. To achieve the target that has been set for the Residential sector (a 39.3% reduction in emissions by FY 2030), the main strategies that have been decided on include measures to reduce residential energy consumption by improving thermal insulation performance and adopting high-efficiency home appliances, the building of houses that meet energy-saving standards, and the promotion of the ZEH*1 initiative, etc. As a leading enterprise in the rental housing industry, the Daito Group believes that it is

The Daito Group's Medium-term Environmental Targets

Reduction Target for FY2030 To reduce greenhouse gas Io reduce greenhouse gas emissions volume (Scope 1+2+3) by 26%(compared to the emissions volume in FY 2013) by FY2030.

vitally important to implement measures that promote energy saving in individual homes, from the construction stage onwards.

In addition, on the basis of the sectoral target set for the Commercial sector (a 39.8% reduction in emissions by FY 2030), the Daito Group has committed itself to a long-term target of reducing the Group's greenhouse gas emissions volume (Scope1+2) by 50% (compared to the emissions volume in FY 2013) by 2035.

To realize this goal, besides implementing various measures such as switching over to the use of LED lighting, structuring working hours more efficiently, and promoting eco-friendly driving, we are also working actively to develop and adopt new construction techniques that have a smaller environmental footprint, with the aim of helping to realize a low-carbon society.

With regard to wood, which is an important structural material for building construction in Japan, we have formulated a set of Timber Procurement Guidelines, and we are promoting the environmentally-friendly, socially-responsible procurement of wood and wood products. We are also proactively implementing measures to increase the utilization of timber sourced domestically in Japan, and we have launched various activities aimed at helping to build a society that is in harmony with nature and at supporting the sustainable utilization of forest resources both in Japan and overseas. In addition, with the aim of helping to realize a recycling-based society, the Daito Group is adopting building structure and construction techniques that reduce the amount of industrial waste generated, as well as introducing other measures to reduce industrial waste generation during construction, and focusing heavily on the promotion of recycling.

In FY 2017, thanks to the support we have received from our stakeholders, the Daito Group posted a year-on-year increase in sales volume. Despite this growth, we also succeeded in cutting our greenhouse

Reduction Target for FY2035 To reduce greenhouse gas To reduce greenhouse gas emissions volume (Scope1+2) by 50% (compared to the emissions volume in FY 2013) by FY2035

gas emissions, as a result of Group-wide activities to reduce our environmental footprint. In the future, we will continue to proactively implement activities aimed at helping to realize a sustainable society.

Responding to the widespread calls to improve the environmental performance of rental housing, in November 2017 we completed construction of the first rental housing unit in Japan that meets Net Zero Energy House (ZEH) criteria. The Daito Group's "Daito Kentaku Original ZEH Rental Housing" incorporates a low-voltage integrated power management system that meets the requirements of the ZEH-M standard, and which provides benefits for both residents and owners. By both saving energy and creating energy, this new type of rental housing can make a positive contribution towards combating global warming. *1 For more information, please see page 6

Increasing corporate value by addressing environmental issues

The Daito Group is implementing business activities that seek to transform the global-scale risks presented by climate change into opportunities. As a leading enterprise in the rental housing business, we are actively implementing measures, such as the widespread development of ZEH rental housing, that are aimed at enhancing building value, creating comfortable living spaces, and contributing towards the reduction of buildings' environmental footprint (i.e. reducing CO₂ emissions). We are also taking steps based on the vision of, in the future, having all of the electric power used in our business operations generated from renewable energy sources, with the goal of helping to realize the transition from a low-carbon society to a post-carbon society.

As a member of society, in the future the Daito Group will continue to proactively and boldly implement measures aimed at helping to solve environmental problems and realize a sustainable society.

Successful completion of Japan's first multi-unit rental housing that meets ZEH criteria

In November 2017, the Daito Group completed the construction of the first multi-unit rental housing in Japan that meets Net Zero Energy House (ZEH) criteria, through a joint development project in collaboration with Kyocera Corporation, which develops and sells photovoltaic electricity generation systems.



Japan's first multi-unit rental housing project that meets ZEH criteria for detached house (located in Izu City, Shizuoka Prefecture)

Contributing to the realization of a post-carbon society by promoting ZEH adoption

In response to the Paris Agreement on Climate Change that was signed in 2015, the Japanese government set a target of reducing greenhouse gas emissions by 26%, compared to the level of emissions in FY 2013, by FY 2030. ZEH is one of the main initiatives that will be utilized to achieve this target. ZEH is viewed as the "trump card" for bringing about a comprehensive restructuring of energy demand in Japan, and as being able to make a pronounced positive contribution to society; Japan's Ministry of Economy, Trade and Industry (METI), Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and Ministry of the Environment (MOE) are working together to promote ZEH. Japan's Basic Energy Plan (BEP) includes a target of "realizing ZEH, on average, for all new housing by 2030," and Japan's multi-unit rental housing sector, which account for around 40% of all housing in Japan, is expected to play its part in promoting ZEH. As a leading enterprise in the rental housing sector, the Daito Group is working actively to promote ZEH multi-unit rental housing, focusing on the reduction of utility costs and reducing buildings' environmental footprint, etc.

> A Net Zero Energy House (ZEH) is a house that realizes zero annual net primary energy consumption through the use of energy-saving measures including improve thermal insulation performance and the adoption of more efficient household appliances, and through the generation of electric power using photovoltaics, etc.

Primary energy used in our daily lives



Contributing towards the conservation of sustainable forest environments through widespread timber utilization and adoption of wood construction techniques

By using timber as the main structural material in our buildings, the Daito Group is helping to promote the maintenance of "cyclical" forest environments and contributing towards the slowing of global warming. In particular, by promoting the use of timber that has been produced domestically in Japan, we are contributing towards addressing social problems, such as forest neglect, that have arisen because of the decline of the forestry industry in Japan. We have formulated new Timber Procurement Guidelines that govern the purchasing of timber, and we have been strengthening our supply chain management.

Contributing towards combating global warming through the use of timber

In order to combat global warming, it is important to prevent the level of concentration of carbon dioxide in the atmosphere from increasing. In the carbon cycle, forests play an important role in sequestering carbon dioxide. Forests' function of sequestering and fixing carbon continues to operate even when trees are logged and processed into timber.

By using timber, which plays such an important role in preventing global warming, and by promoting the widespread construction of wooden buildings, the Daito Group is contributing towards the prevention of global warming through the sequestration and fixing of carbon dioxide; at the same time, the appropriate use of timber also contributes to the maintenance of healthy forests and to forest regeneration.

Formulation of the Timber Procurement Guidelines and strengthening of traceability

The Daito Group has formulated Timber Procurement Guidelines and is working to strengthen timber-related supply chain management. When procuring timber for use in building construction, we mainly purchase timber that has been certified under international certification systems (such as CAS, ISO and FSC), which ensures traceability.

Proactively purchasing domestically-produced timber to conserve Japan's forests

By using timber as an important structural material, the Daito Group is contributing towards the prevention of global warming. Since 2009, we have been using domestically-produced cedar wood, logged from forests in the Tohoku and Kyushu regions of Japan, as a building material. We continue to actively promote the use of domestically-produced timber, and the amount used is increasing steadily year by year

Change in the amount of domestically-produced timber used



What is

ZEH?





Main Data Sets

Resource and energy usage status



Reasons for decrease

The transfer of some offices to Daito Kentaku Leasing, which has been spun off as a separate company, and a change in the method used to calculate on-site electricity consumption.

Total energy inputs:4,791,131GJ

Breakdown of total energy inputs (by category)			
Gasoline	275,059GJ		
Electricity	67,731GJ		
Heat	218GJ		
Chilled water	3,044GJ		
LPG	4,443,214GJ		
Municipal gas	1,670GJ		
Kerosene	194GJ		



Reasons for decrease

The transfer of some offices to Daito Kentaku Leasing, which has been spun off as a separate company, and a change in the method used to calculate on-site water usage.

Water resource inputs by work-site



The transfer of some offices to Daito Kentaku Leasing, which has been spun off as a separate company, and a change in the method used to calculate on-site water usage.





Resource inputs by category

Inputs(t)	2013	2014	2015	2016	2017
Iron	71,214	80,320	79,136	57,947	50,360
Aluminum	46,228	45,002	32,265	29,561	32,906
Plastic	3,632	2,518	2,376	2,232	2,154
Glass	1,219	1,337	1,310	1,201	1,150
Fiberglass insulation	804	2,752	4,273	4,358	4,224
Rock-wool insulation	4,172	1,783	0	0	0
Timber	136,546	147,745	139,350	138,661	134,546
Plasterboard	69,332	67,120	65,013	65,473	63,521
External facing material	28,641	32,630	30,526	30,868	29,988
Concrete	1,037,190	1,038,830	1,079,031	905,350	860,721
Autoclaved lightweight concrete (ALC)	14,766	15,200	12,853	0	12,071
Crushed stone	220,404	125,103	123,515	113,278	109,386
Total	1,634,147	1,560,339	1,569,648	1,361,414	1,301,026





The transfer of some offices to Daito Kentaku Leasing, which has been spun off as a separate company.

Status of emissions affecting the environmental footprint





Greenhouse gas emissions breakdown (Scope1+2+3)

	2013	2014	2015	2016	2017
Scope 1 emissions t-CO ₂ e	27,627	25,065	24,290	23,617	19,239
Scope 2 emissions t-CO ₂ e	24,735	25,095	23,293	21,982	11,191
Scope 3 emissions t-CO ₂ e	4,909,614	5,642,676	5,576,412	4,972,920	4,663,340
Scope 1+2+3 emissions t-CO ₂ e	4,961,975	5,692,836	5,623,995	5,018,519	4,693,770

Reasons for decrease in Scope 1 + 2 emissions

The transfer of some offices to Daito Kentaku Leasing, which has been spun off as a separate company, and a change in the method used to calculate on-site electricity consumption.

Greenhouse gas emissions breakdown by substance (7 substances) (Scope 1)

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	(Converted to t-CO ₂ e)
Carbon dioxide(CO2)	18,815 t-CO ₂ e
Methane(CH ₄)	372 t-CO ₂ e
Dinitrogen oxide(N2O)	51 t-CO ₂ e
Hydrofluorocarbons (HFCs)	0 t-CO ₂ e
Perfluorocarbons (PHCs)	0 t-CO ₂ e
Sulfur hexafluoride (SF ₆)	0 t-CO ₂ e
Nitrogen trifluoride (NF3)	0 t-CO ₂ e

Scope 3 emissions by category

	2017 (t-CO ₂ e)	Share of total Scope 3 emissions
1. Purchased products and services	385,115	8.3%
2. Capital goods	0	0.0%
3. Fuel and energy related activities not included in Scope 1 or 2	669	0.0%
4. Transportation and delivery and transport of general goods	20,600	0.4%
5. Waste deriving from business activities	69,748	1.5%
6. Business travel	2,062	0.0%
7. Employee commuting	943	0.0%
8. Leased assets (upstream)	0	0.0%
9. Transportation and delivery (downstream)	not related	-
10. Processing of products sold	not related	-
11. Use of products sold	4,184,203	89.7%
12. Disposal of products sold	0	0.0%
13. Leased assets (all leased assets excluding E1 shared and trust assets)	0	0.0%
14. Franchise-related	0	0.0%
15. Investment-related	0	0.0%

Greenhouse gas emissions deriving from office electricity consumption



Reasons for decrease

The transfer of some offices to Daito Kentaku Leasing, which has been spun off as a separate company.

Greenhouse gas emissions deriving from on-site electricity consumption



A change in the method used to calculate on-site electricity consumption.



The decrease in the number of company carsvfollowing the spinning off of Daito Kentaku Leasing as a separate company.



The transfer of some offices to Daito Kentaku Leasing, which has been spun off as a separate company, and a change in the method used to calculate on-site water consumption. ter discharge is calculated using data for water inputs.



The transfer of some offices to Daito Kentaku Leasing, which has been spun off as a separate company, and a change in the method used to calculate on-site water consumption. *Wastewater discharge is calculated using data for water inputs.

by item / Recycling amount / Final disposal amount						
		Total waste disposal amount (t)	Recycling amount (t)	Final disposal amount (t)		
	Copier paper and premium-grade paper	0.7	0.7	0.0		
	Newspaper	7.1	7.1	0.0		
	Magazines	41.9	41.9	0.0		
	Cardboard	62.6	62.6	0.0		
	Mixed paper	587.7	587.7	0.0		
Ger	Kitchen waste and miscellaneous waste	37.3	0.0	37.3		
hera	Bottles	0.0	0.0	0.0		
N IN	Cans	0.1	0.1	0.0		
aste	PET bottles	0.1	0.1	0.0		
	Expanded polystyrene	0.1	0.1	0.0		
	Plastic waste	34.4	34.4	0.0		
	Lunch box waste etc.	11.3	0.0	11.3		
	Waste oil	0.0	0.0	0.0		
	Bulky refuse	49.6	0.0	49.6		
	Cinders	0.0	0.0	0.0		
	Sludge	27,630.4	26,123.4	1,506.9		
	Waste oil	0.0	0.0	0.0		
	Waste acid	0.0	0.0	0.0		
	Waste alkali	0.0	0.0	0.0		
	Plastic waste	67,009.9	48,117.5	18,892.4		
	Waste paper	14,517.5	13,826.3	691.2		
	Wood chips	152,683.6	147,718.7	4,964.8		
Ind	Fiber waste	1,140.2	946.5	193.7		
ustr	Waste plasterboard	23,511.8	20,203.1	3,308.8		
ial v	Animal and plant residues	0.0	0.0	0.0		
vast	Unwanted animal and plant solid matter	0.0	0.0	0.0		
œ.	Waste rubber	0.0	0.0	0.0		
	Waste scrap metal	24,287.4	23,907.9	379.6		
	Glass waste, and concrete and ceramic waste	43,229.5	18,565.4	24,664.2		
	Slag	0.0	0.0	0.0		
	Rubble	352,652.2	309,477.6	43,174.6		
	Mixed waste	552.6	0.0	552.6		
	Waste containing asbestos	5,254.8	0.0	5,254.8		
	Animal feces and urine	0.0	0.0	0.0		
	Animal corpses	0.0	0.0	0.0		
	Dust and soot	0.0	0.0	0.0		



Disposal amount for industrial waste + general waste

Industrial waste recycling amount by item

	2013 (t)	2014 (t)	2015 (t)	2016 (t)	2017 (t)
Concrete rubble	127,662	70,207	216,314	227,984	234,360
Asphalt concrete rubble	19,115	8,132	27,783	56,504	28,171
Other rubble	60,086	48,252	54,464	47,917	46,946
Glass and ceramic waste	22,315	18,502	16,379	15,565	18,565
Plastic waste	33,239	35,285	39,918	40,257	48,117
Waste scrap metal	40,658	16,649	23,404	25,359	23,908
Construction site sludge	6,197	9,908	24,117	6,674	26,123
Waste paper	9,469	7,087	5,961	9,705	13,826
Wood chips	137,742	115,768	140,256	130,833	147,719
Fiber waste	1,484	534	924	623	947
Waste plasterboard	60,989	54,027	18,441	17,935	20,203

Industrial waste recycling amount by item

	2017
Concrete rubble	98.9 %
Asphalt concrete rubble	98.9 %
Other rubble	53.9 %
Glass and ceramic waste	43.0 %
Plastic waste	71.8 %
Waste scrap metal	98.3 %
Construction site sludge	94.6 %
Waste paper	92.2 %
Wood chips	96.8 %
Fiber waste	83.0 %
Waste plasterboard	85.9 %



Disposal amount for industrial waste + general waste

For a part of environmental data in this Environmental Report, we received independent practitioner's assurance from Deloitte Tohmatsu Sustainability Co., Ltd.

in the Japanese-language version of our Environmental Report. For more details, please see our Japanese-language Environmental Report.



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Capital: 29,060 million yen Stock listings: The first sections of Tokyo Stock Exchange and Nagoya Stock Exchange [Editing] Environmental Management Project Technology and Purchasing Department [Contact] Customer Service Office 0120-1673-43 (toll-free number in Japan only) Toll-free number business hours: 10:00 a.m. to 5:30 p.m. (except for weekends, public holidays, and the Company's summerand New Year holidays.) * All information shown in this report is protected by the Copyright Act and other relevant laws. Unauthorized use, redistribution, or reproduction is prohibited.

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