

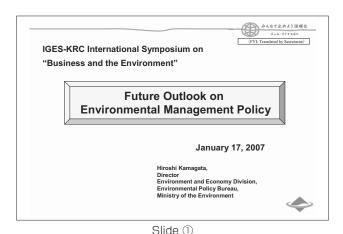
Panel Report 1

Future Outlook on Environmental Management Policy

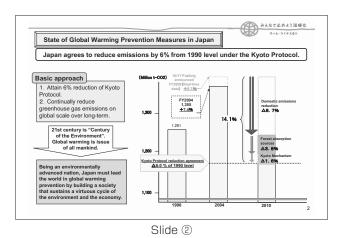
Hiroshi Kamagata

Director, Environment and Economy Division, Environmental Policy Bureau, Ministry of the Environment



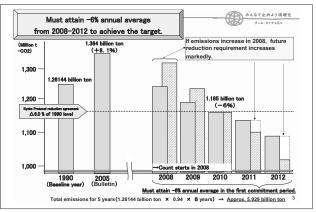


Before getting into the subject of my presentation, I would like to share a common understanding with you how difficult the situation of environmental policy is and how structured reform is to be pursued. I am afraid my introduction would be a bit long, but I would like to remark briefly to the global warming prevention measures.



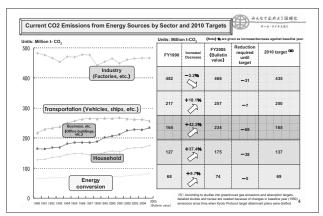
As you well know, under the Kyoto Protocol, Japan has promised to reduce greenhouse gas emissions to 6% less than the 1990 level. But, if

you allow for the 8.1 % increase as of 2005, the gap from our target adds up to 14.1%



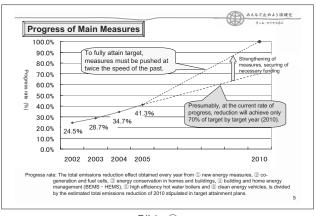
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On the question whether a 14.1% reduction suffices or not, when you think about it carefully, under the Kyoto Protocol, we must maintain emissions on the average over the five years from 2008 to 2012 at 6% below the 1990 level. Our current emissions level is extremely high and, if we head into 2008 without doing anything, the reduction amount required in 2012 will be even worse. It is hard to give a concrete figure in percentage, but we might be looking ahead at something like 20% range, therefore we must be aware of this critical situation. I would like you to understand that, if we cross into the commitment period of the Kyoto Protocol without doing enough, we will be in a tight situation. To take baseball as an example, if you give up a lot of runs in the top of the first inning, you will have to make them up in the bottom of seventh, eighth and ninth innings.



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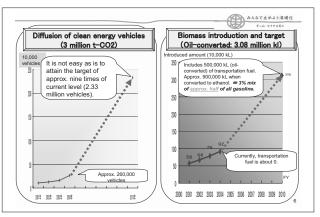
I trust you are all informed of the sectors where CO₂ emissions are increasing. In the industrial sector it is roughly flat or rather decreasing somewhat, while the increase in emissions from households and business field is remarkable. From households alone, emissions have increased 37% compared to the 1990 level, while emissions from the offices have increased 42 %. As emissions need to be reduced substantially in various fields, proper lifestyles and business models are desired to be established.



Slide ⑤

Then, as for the progress of measures in Japan, the government drew up plans to attain the reduction targets of the Kyoto Protocol and has been therewith advancing the measures. Given the progress in percentage, they have been implemented as of 2005 at about 40%, and if the

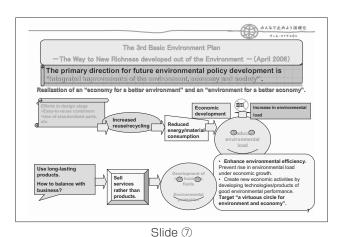
way things are going, we will attain only 70 % of the intended target by the commitment year 2010, which again puts us in a critical situation. It is not to say that Global warming prevention measure is accomplished as long as you just have to uphold the Kyoto Protocol. It is a permanent issue and therefore I would like to point out that it must be tackled fundamentally throughout the entire society.



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I would like to now give you a picture of some measures. Plans call for -- for example -- the diffusion of clean energy vehicles such as hybrid vehicles. Targeting to reduce 3 million tons of CO₂ emission by diffusing and substituting 2.33 million vehicles by the year 2010, the penetration is however no more than 260,000 as of 2004. Moreover, by using biomass energy, the target is to reduce 3 million kiloliter of oil, while we have so far introduced only a million ton, indicating that we must advance fundamental measures..

This concludes my introduction. In this kind of difficult condition, superficial measures are of little use to get anything done. What we are asked to do is to change the way of society and economy fundamentally.



The government draws up Basic Environmental Plan that envisions the future of entire environmental policies, which has been revised last April. As the primary direction, it was proposed to make integrated improvements to the environment, economy and society. As for the economy, it represents; if the environment improves, so does the economy; if the economy improves, so does the environment likewise. The point is to promote activities in a direction toward the integrated improvements of the environment, economy and society. In other words, it can be paraphrased as "simultaneous pursuit of environment and economy".

I would like to introduce some of specific policies for promoting the integration of the environment and economy.



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Let me introduce some of measures in which our section is engaged. For one thing is, green purchasing. As you know, green purchasing will lead to the decrease of environmental load, by creating demand on the buyer's side, to help spread products and services of low environmental load as well as eco-friendly products.

As you can see here, businesses supply the market with products of low environmental load, which consumers then purchase. The concept of green purchasing is to get the consumer to drive this momentum. As for how it is promoted, government enacted the Green Purchasing Law and is creating demand through its procurement practices, so we ourselves are the driving force at the moment. By taking the initiative to purchase eco-friendly products and services, we are expecting it will stimulate demand and business activities, eventually to encourage consumers' purchasing behavior.



Slide 9

Here are the workings of the Green Purchasing Law: The government determines the basic policy and "designated procurement item". In short, types and specifications are determined for the eco-friendly goods to be purchased. For example, copy paper in your hands. The standard is set up to procure only 100 % recycled paper for copying. Or, for your typical ballpoint pen and other stationery supplies, specs are deter-



mined for each product such as plastic must be at least 40% recycled plastic. These kinds of products are promoted within governmental procurement practices. In that sense, governments are stimulating demand. Each ministry and national authority decides its own procurement policy every year and adopts schemes to implement the targets.

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Category	Specified Procurement Items (By Cabinet decision of 2/28/06)		Category	Specified Procurement Items (By Cabinet decision of 2/28/06	
Paper	Information paper (copy paper, etc.), printing paper, sanitary paper (toilet paper, tissue paper, etc.), etc. 8 items		Uniforms Work clothes	Uniforms, work clothes	
Stationary	Mechanical pencils, ball pens, scissors, glue, files, binders, etc. 79 items		Interior decorations, bedding	Carpets, curtains, blankets, mattresses, bed frames, etc. 9 items	
Furniture	Chairs, desks, shelves, coat hangers, umbrella stands, blackboards, etc. 10 items		Work gloves	Work gloves	
Office equipment	Copiers, printers, facsimiles, displays, etc. 13 items		Other textile products	Tents, tarps, guard nets	
Home appliances	Refrigerators, freezers, cold storage boxes, electric toilet seats		Systems	Solar power systems, fuel cells, solar heating systems, raw waste processors	
Air-conditioning, etc.	AC, gas heat pump cooler-heaters, space heaters			Tättatrials (Recycled wood mass boards, illes, mit ommert, recycled aggregate, primer, pomeable concrete, insulating sashes, auto sprintlers, lighting coordio systems, soverage dudge fertiliser, det.) (2Construction machinery (That with emissions measures, low Visions), etc.) (3Work methods (Construction sludge recycle processing, concrete block recycle processing, dec.) (48 Purpos-specific items (Rochting gardens, wastewater prevent, permeable pervenent)	
Hot water equipment, etc.	Electric boilers, gas water heaters, oil water heaters, gas ranges		Public projects		
Lighting	Fluorescent lighting fixtures, fluorescent lamps, light bulbs		r abiio projecto		
Vehicles, etc.	Vehicles (Natural gas vehicles, hybrid vehicles, etc.), ETC products, car navigation systems, etc. 5 items		Services	Energy conservation diagnoses, cafeterias, printing, vehicle servicing, building management cleaning, etc. 7 items	
Fire extinguishers	Fire extinguishers		Total	17 categories, 214 items	

Slide 10

Please forgive me for the fine print. At present, types and specifications are set for 214 products in 17 categories, which governments then procure. While I have mentioned paper and stationery supplies, examples include vehicles, lowemission vehicles. Right now, all general official vehicles have become low-emission. Speaking of another example in the recent trends, wood is used for public projects and paper is made from woods. Illegal lumbering is currently a very grave environmental problem, so as a measure against illegal lumbering, all procured lumber must be checked for compliance with laws and regulations of the source country. If there is no verification, the wood cannot be procured. This kind of policy has been adopted and is beginning to show results. Certifications are now being used. Hence, the procurement of legally felled lumber is being decided by governments.

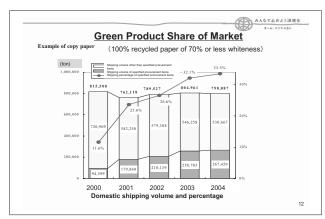
	s Reduction Effe			rchasin
by National G	overnment, etc. (Estimate	<u>e)</u>	
Comparison bety	ween 2000 (Prior to Gree	n Purchasing	g Law) an	d 2004
Category/Item	Source	Annual reduction	Years of use	Total reduction
Plastic stationary	Emissions from incineration	761	_	76
Dust blower	Switching from HFC134a to HFC152a	8,587	1	8,587
Office equipment	Emissions from use of electricity	265	5	1,325
Home appliances	Emissions from use of electricity	339	10	3,395
AC	Emissions from use of electricity	250	10	2,495
Hf inverter equipment	Emissions from use of electricity	846	10	8,456
Vehicles	Emissions from driving	2,483	5	12,415
Solar power system	Emissions from system introduction	213	15	3,192
Furnace ash cement	Emission from industrial processes	1,184	_	1,184
Total	_	14,928	_	41,810

Slide 11

This table shows how effective those efforts are towards reducing environmental load. For example, plastic stationery supplies must be made of recycled plastic, as I said before. Well, instead of using recycled plastic, say we burned what is supposed to be used in its place, this table shows how much CO2 would have been emitted. As for home appliances, energy saving models are specified for purchasing, compared to conventional office equipment and home appliances that do not conserve energy, it gives how much electricity has been saved. If they are all added up and converted into CO2 emissions, it comes to 14,928 ton a year. Though the amount is small as it includes only figures that can be calculated, we are advancing measures targeting CO2 reduction. The truth of the matter is, as I mentioned before, Japan as a whole must reduce emissions on a 100 to 200 million ton basis, so these figures are small indeed. Nonetheless, we are pursuing CO₂ reductions and hope to achieve an effect by means of green purchasing.

So, how far is the market actually to be changed? For the green product example, here is copy paper. The Green Purchasing Law came into effect in 2001, so 2000 was the year before. The copy paper which meets the standard of 100 % recycled accounted for only 11.6 % in the





Slide 12

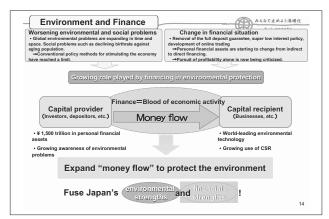
market that year. By 2004, it had increased up to one-third, 33%. This is a classic example, but the idea is to increase the market share of ecofriendly products by having the government-pulled demand. This is what green purchasing is at present.



Slide 13

Our goal is to promote green purchasing across the national government, all local governments and about 50% of the listed companies.

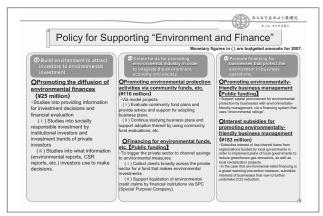
Let me move on to the next theme. I said earlier that we want demand to drive eco-friendly products. Now, the question is how to get the money flowing. Just recently, we have focused our attention on finance. Finance is the blood flow of economic activity and we are looking for ways to channel the flow of money as much as



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possible into the eco-business and behaviors of low environmental load.

In this scheme, the capital provider is on the left and the capital recipient on the right. The objective of our policy is to build systems that enable money to flow to businesses that promote the eco-business in a variety of ways and people involved with the local environment. This flow of money suggests, – put plainly – as low interest loans as possible from banks to those who work for the environment, besides as large amount as possible. In the case of stock investing too, we would like to encourage investors to buy stock of the companies with eco-friendly activities.



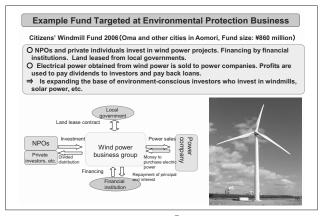
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As we have just got started with this policy, we are still in the process of shaping it, but I would like to introduce a couple of programs we



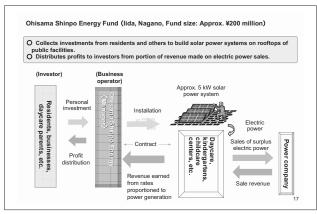
are developing for the next year. One thing is to provide support for community funds. A classic example would be private windmills. Residents would donate or lend money to build windmills for generating wind power. Another example is environmental funds. Little by little, funds invested in the eco-business are emerging, and the national government therewith has launched to help invest and finance such funds.

Another program will be to subsidize interest payments on loans for eco-friendly management practices. The Development Bank of Japan, a government-affiliated bank, loans money to environmentally conscious businesses, besides, if the they promise to reduce CO₂ emissions by 5% or more over a five-year period, in return, the national government will subsidize 1% of the interest. This is a program which we are launching. We want to support the eco-business by making it easier for businesses with eco-friendly activities to borrow money and procure the fund. This is our policy for encouraging the environment and finance.

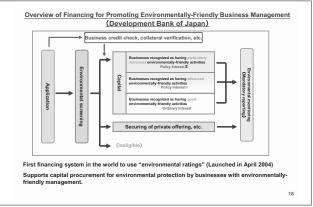


Slide 16

Examples of the funds for environmental protection business include what is established through the fund-raising by individuals and NPOs to build natural energy systems by wind power. The scheme could be similarly applied to solar power, as well. This is a conceptual view of the



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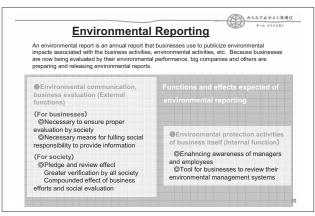
rich water resou	ses Interests	ADIRO City acquisition Acc	
ootang or the re	Issuer	Abiko City	
	Total issued amount	¥200 million	
	Project	Furutone Wetlands Land acquisition	
	Date issued	11/25/04	
	Interest rate	0.58% annum	
	Interest payments	Twice per year	
	Repayment condition	One-time redemption at 5-year matur	rity
Though low-return investment, capital investors can contribute to environmental protection implemented by local governments.			

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financing scheme offered by the Development Bank of Japan for environment-rated loans. Businesses are screened to determine if management is eco-friendly or not, and ranked on three levels. Interest rates differ according to the rank such that businesses making more environmental ef-

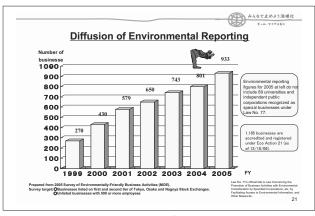


forts can borrow money at lower interest.



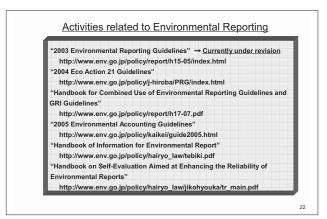
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Up to this point, I have explained our policies, green purchasing which aims to make demand the driving force, and environmentally-conscious financing as a mean to create a flow of money. But, in order to support businesses with financing, businesses must report appropriately what they are doing for the environment. Then, we have one more policy, promoting the environmental reporting, which encourages businesses to demonstrate what they are doing for the environment For example, business puts together a report to announce what they have done in order to reduce CO₂ emissions, and make it available to the general public.



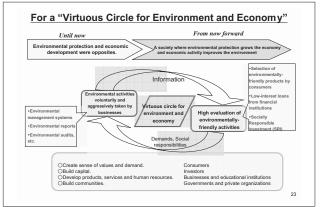
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As far as we have grasped, latest figures of 2005 indicate that approximately 1,000 businesses



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- 933 to be precise - released an environmental report. We expect that these businesses who publish their efforts will be valued as a consequence, to lead to their advantage such as easier finance by the loans.



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Lastly I would like to summarize the conclusions. I find it the key point in common that businesses working more on the environment are welcomed and valued for their efforts, by means of green purchasing, environmentally-oriented financing, or environmental reporting to announce to the public what they are doing for the environment. Green purchasing, one of our main measures is to encourage people to purchase eco-friendly products when they are marketed. In other words, we expect those businesses to be successful. As for environmentally-oriented



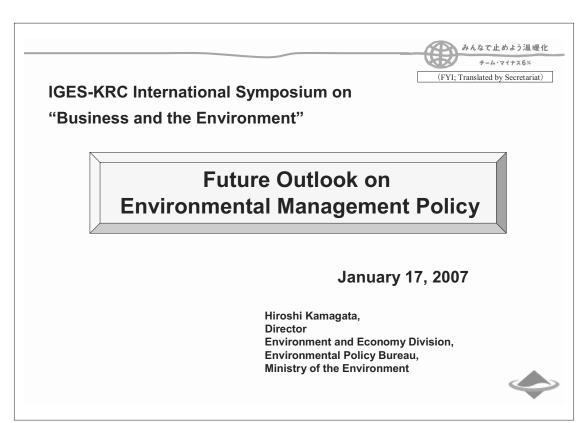
financing, we will be supporting the eco-business by making it easier for businesses working on the environment issue to borrow money. These are what we are addressing.

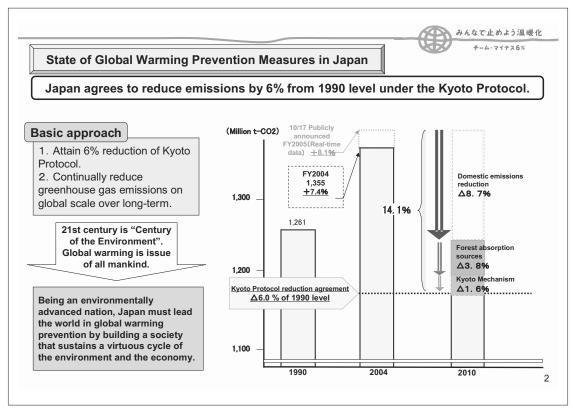
In the situation described as above, we expect environmental activities being highly evaluated, which will lead to growth of the eco-business, ie; as the environment improves, so will that business. And as the business improves, so will the environment. We would like to advance the measures taking "virtuous cycle for the environment and economy" as the keyword in the future society.

Let me reiterate one last time that our goal is to create people and businesses who welcome environmental activities and work for the environment, and a society where those people and businesses are rewarded. That is the goal of our policies.

This is the end of my presentation. Thank you very much for your kind attention.

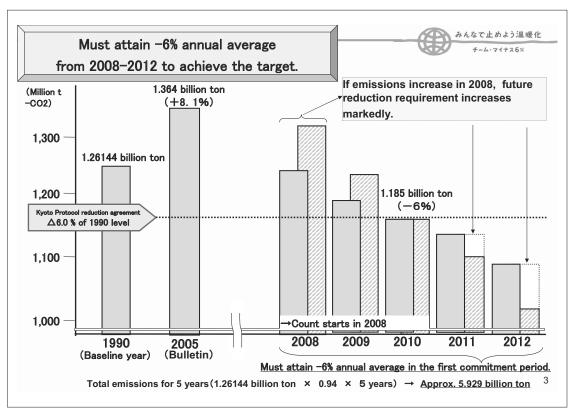




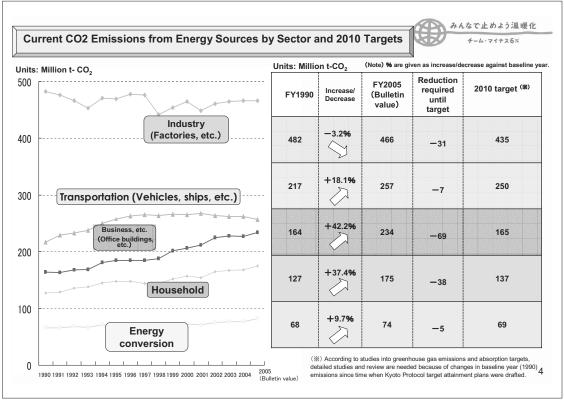


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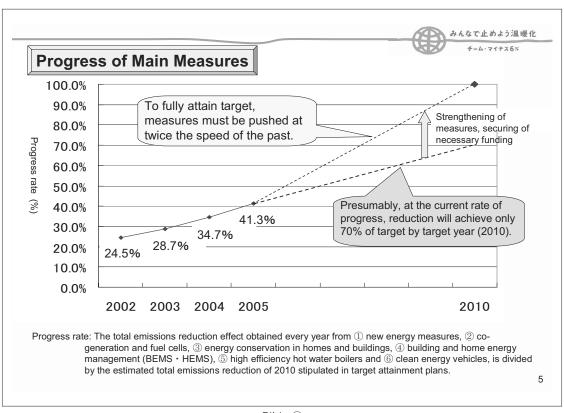


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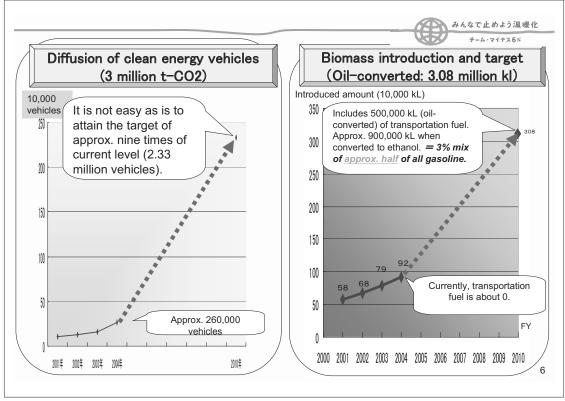


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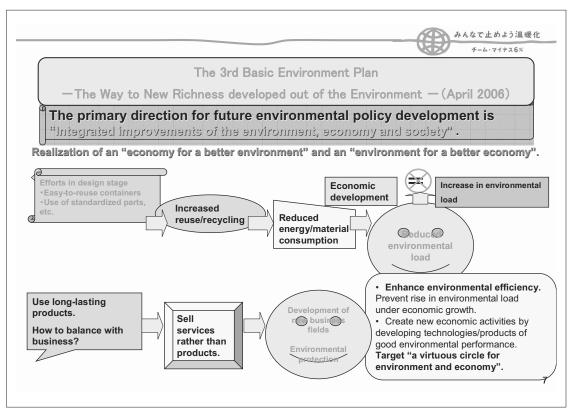


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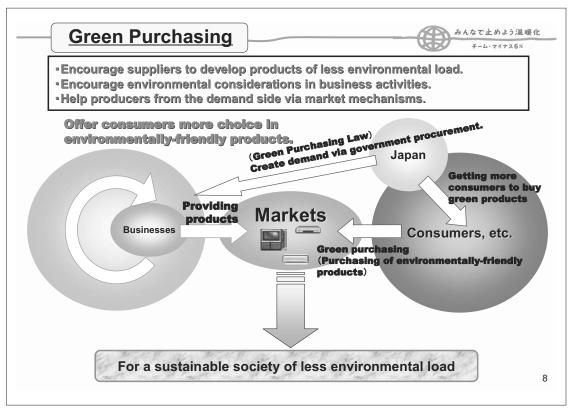


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Furniture	Chairs, desks, shelves, coat hangers, umbrella stands, blackboards, etc. 10 items	Work gloves Work gloves		
Office equipment	Copiers, printers, facsimiles, displays, etc. 13 items	Other textile products Tents, tarps, guard nets		
Home appliances	Refrigerators, freezers, cold storage boxes, electric toilet seats	Systems	Solar power systems, fuel cells, solar heating systems, raw waste processors	
Air-conditioning, etc.	AC, gas heat pump cooler-heaters, space heaters		Materials (Recycled wood mass boards, tiles, m cement, recycled aggregate, primers, permeable concrete, insulating sashes, auto sprinklers, lightir.	
Hot water equipment, etc.	Electric boilers, gas water heaters, oil water heaters, gas ranges	Public projects	control systems, sewerage sludge fertilizer, etc.) 47 items) (2)Construction machinery (That with emissions measures, low vibration, etc.) (3)Work methods (Construction sludge recycle processing, concrete block recycle processing, etc. 6 items) (4)Purpose-specific items (Rooftop gardens, wastewater pavement, permeable pavement)	
Lighting	Fluorescent lighting fixtures, fluorescent lamps, light bulbs	T ublic projects		
Vehicles, etc.	Vehicles (Natural gas vehicles, hybrid vehicles, etc.), ETC products, car navigation systems, etc. 5 items	Services	Energy conservation diagnoses, cafeterias, printing, vehicle servicing, building management, cleaning, etc. 7 items	
Fire extinguishers	Fire extinguishers	Total	17 categories, 214 items	

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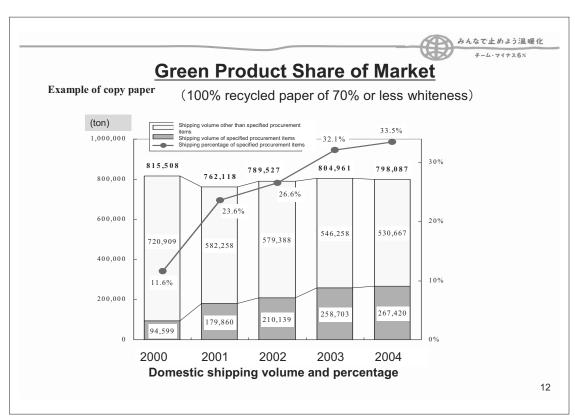
CO₂ Emissions Reduction Effect of Green Purchasing by National Government, etc. (Estimate)

Comparison between 2000 (Prior to Green Purchasing Law) and 2004

		Green house gas emission reduction (Converted to t-CO2)			
Category/Item	Source	Annual reduction	Years of use	Total reduction	
Plastic stationary	Emissions from incineration	761	-	761	
Dust blower	Switching from HFC134a to HFC152a	8,587	_	8,587	
Office equipment	Emissions from use of electricity	265	5	1,325	
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Furnace ash cement	Emission from industrial processes	1,184	_	1,184	
Total	_	14,928	_	41,810	

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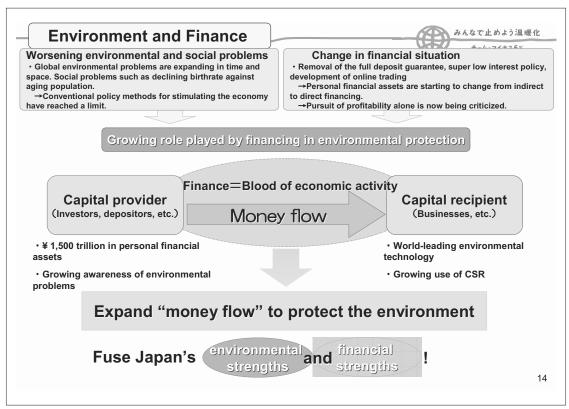
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Slide 12







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Policy for Supporting "Environment and Finance"

Monetary figures in () are budgeted amounts for 2007.

 Build environment to attract investors to environmental investment

OPromoting the diffusion of environmental finances (¥25 million)

- •Studies into providing information for investment decisions and financial evaluation
- (i) Studies into socially responsible investment by institutional investors and investment trends of private investors
- (ii) Studies into what information (environmental reports, CSR reports, etc.) investors use to make decisions.

② Create funds for promoting environmental industry in order to integrate the environment, economy and society.

OPromoting environmental protection activities via community funds, etc. (¥110 million)

- ·Via model projects
- (i) Evaluate community fund plans and provide advice and support for adopting business plans.
- (ii) Continue studying business plans and support adoption thereof by using community fund evaluations, etc.

OFinancing for environmental funds, etc. [Public funding]

- •To trigger the private sector to channel savings to environmental measures
- (i) Collect clients broadly across the private sector for a fund that makes environmental investments.
- (ii) Support liquidation of environmental credit claims by financial institutions via SPC (Special Purpose Company).

③ Promote financing for businesses that protect the environment in business

OPromoting environmentallyfriendly business management [Public funding]

 Support capital procurement for environmental protection by businesses with environmentallyfriendly management, via a financing system that uses "environmental ratings".

OInterest subsidies for promoting environmentallyfriendly business management (¥183 million)

- 'Subsidize interest of low-interest loans from organizations funded by local governments in order to implement plans of local governments to reduce greenhouse gas emissions, as well as local revitalization projects.
- order to implement plants of local governments to reduce greenhouse gas emissions, as well as local revitalization projects. In the case that environmental-rated financing is a global warming prevention measure, subsidize interests of businesses that vow to further undertake CO2 reduction.

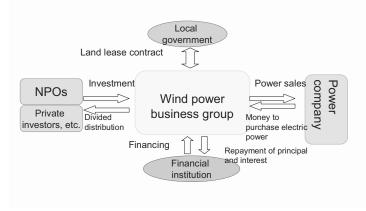
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Example Fund Targeted at Environmental Protection Business

Citizens' Windmill Fund 2006 (Oma and other cities in Aomori, Fund size: ¥860 million)

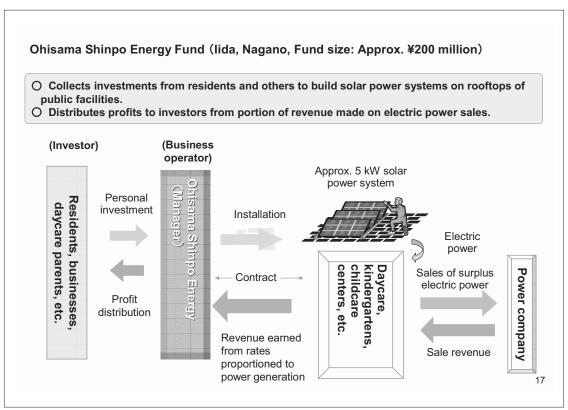
- O NPOs and private individuals invest in wind power projects. Financing by financial institutions. Land leased from local governments.
- O Electrical power obtained from wind power is sold to power companies. Profits are used to pay dividends to investors and pay back loans.
- \Rightarrow Is expanding the base of environment-conscious investors who invest in windmills, solar power, etc.



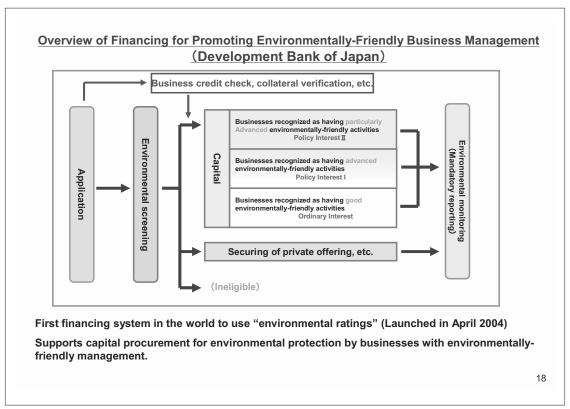


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Slide 17



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Example of Local Industry Fund (Municipal Bonds)

Local residents

Local businesses and organizations

Purchase
Abiko City

Abiko City

Land
Acquisition

Furutone Wetlands Land
Acquisition Project

**Land acquisition aimed at protecting Furutone Wetlands

Supplied capital is used to help acquire land in Furutone Wetlands so as to enclose the rich water resources and rare natural environment, and preserve the appearance and setting of the Tone River as it was.

Issuer	Abiko City
Total issued amount	¥200 million
Project	Furutone Wetlands Land acquisition
Date issued	11/25/04
Interest rate	0.58% annum
Interest payments	Twice per year
Repayment condition	One-time redemption at 5-year maturity

Though low-return investment, capital investors can contribute to environmental protection implemented by local governments.

19

Slide 19





An environmental report is an annual report that businesses use to publicize environmental impacts associated with the business activities, environmental activities, etc. Because businesses are now being evaluated by their environmental performance, big companies and others are preparing and releasing environmental reports.

Environmental communication, business evaluation (External functions)

(For businesses)

ONecessary to ensure proper evaluation by society

(For society)

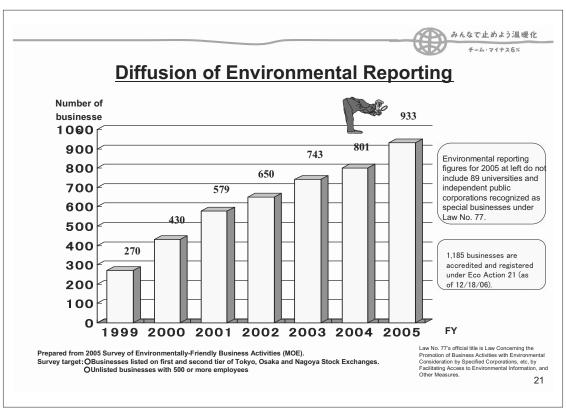
©Pledge and review effect Greater verification by all society Compounded effect of business efforts and social evaluation Functions and effects expected of environmental reporting

- Environmental protection activities of business itself (Internal function)
- ©Enahncing awareness of managers and employees
- ©Tool for businesses to review their environmental management systems

20

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Activities related to Environmental Reporting

"2003 Environmental Reporting Guidelines" → <u>Currently under revision</u> http://www.env.go.jp/policy/report/h15-05/index.html
"2004 Eco Action 21 Guidelines" http://www.env.go.jp/policy/j-hiroba/PRG/index.html

"Handbook for Combined Use of Environmental Reporting Guidelines and GRI Guidelines"

http://www.env.go.jp/policy/report/h17-07.pdf

"2005 Environmental Accounting Guidelines" http://www.env.go.jp/policy/kaikei/guide2005.html

"Handbook of Information for Environmental Report"

http://www.env.go.jp/policy/hairyo_law/tebiki.pdf

"Handbook on Self-Evaluation Aimed at Enhancing the Reliability of Environmental Reports"

http://www.env.go.jp/policy/hairyo_law/jikohyouka/tr_main.pdf

22

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