

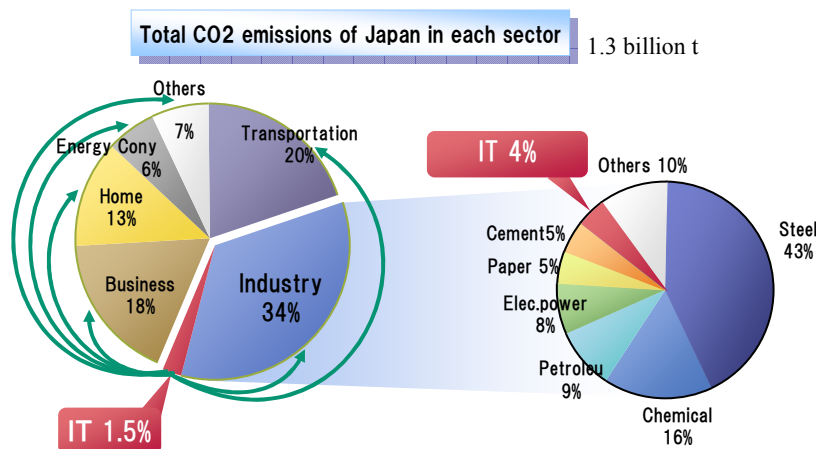
Green IT Initiative in Japan

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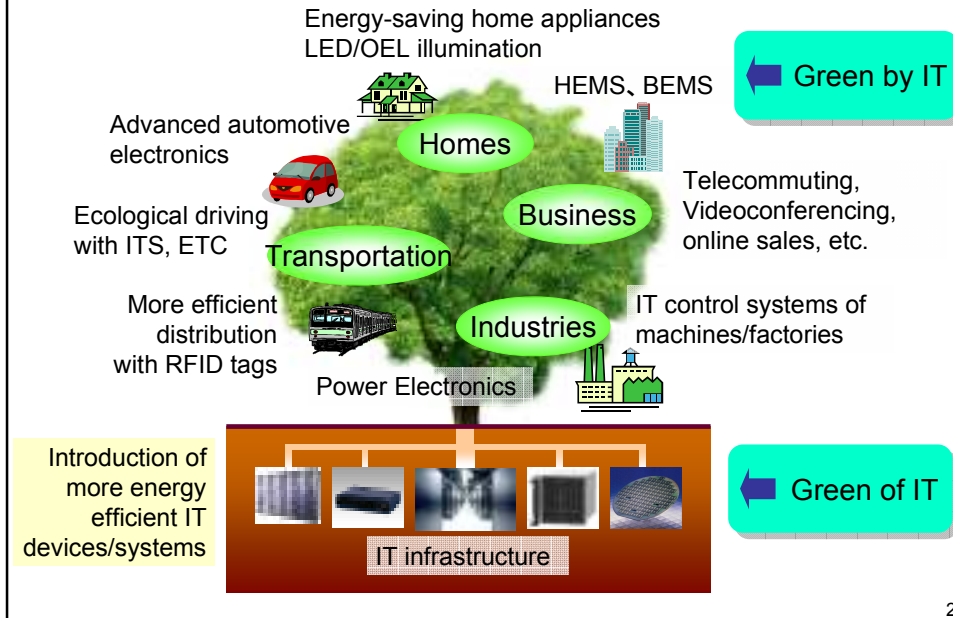
1. 2% vs. 98% issue: IT is more contributor than polluter

While CO2 emission by IT industry is less than 2% of that of whole Japan, IT contributes to reduction of CO2 emissions in other 98% areas.



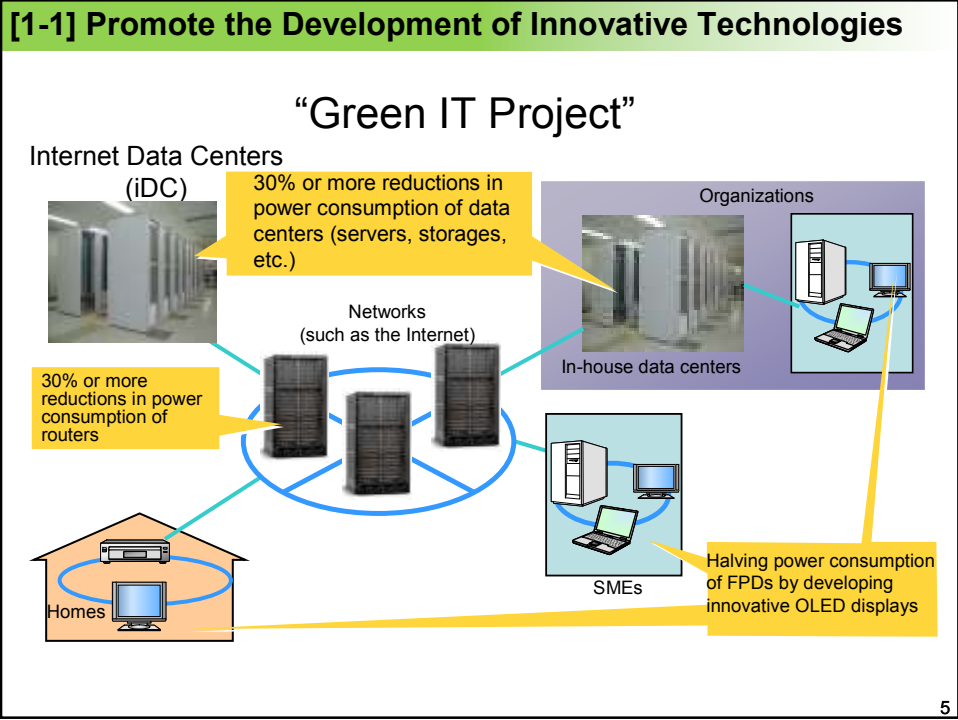
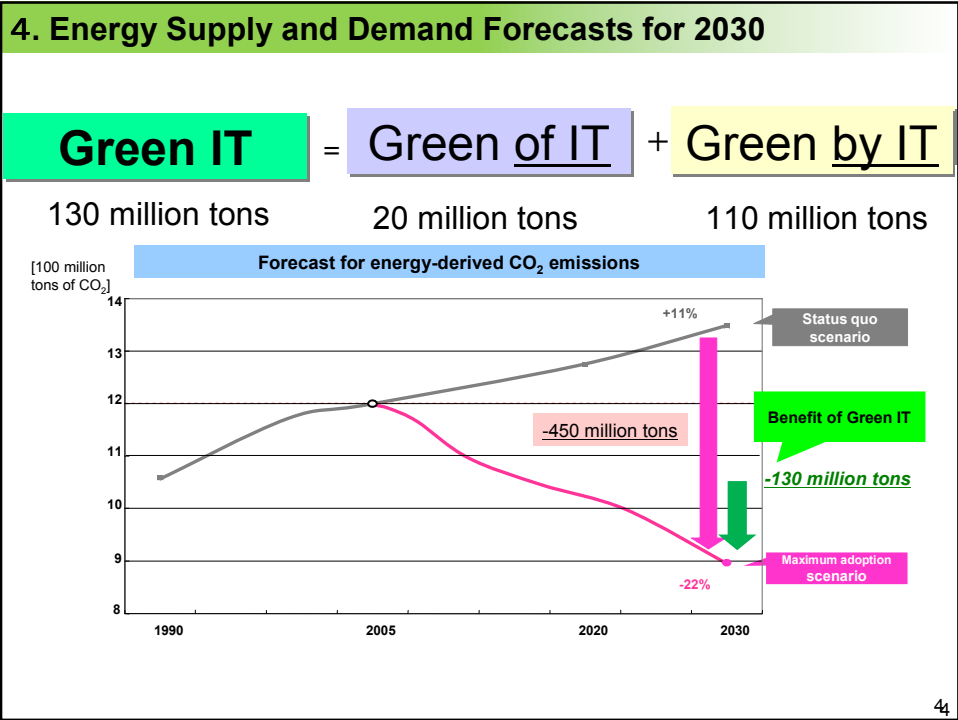
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2. IT's contribution to conserving energy in Society



3. Green IT Initiative in Japan





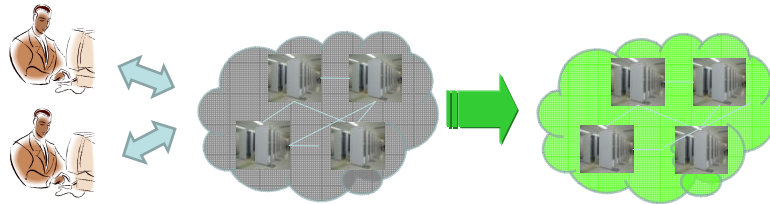
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[1-2] Promote the Development of Innovative Technologies

METI intends to realize green cloud computing as the next-generation IT infrastructure, which will make it possible to slash energy consumption while significantly raising the efficiency of IT usage in the service industry, the manufacturing industry, and the IT user industry.

Green Cloud Computing Project

(Requested a budget of ¥6.8 billion for FY 2009 (FY 2008 budget was ¥3.0 billion))



Energy savings at the semiconductor level

- Innovative energy-saving semiconductors (many-core technology, etc.)
- Power electronic devices

Energy savings in IT devices and systems

- Device-level cooling technologies
- High-density storage technologies
- Ultra-efficient routers

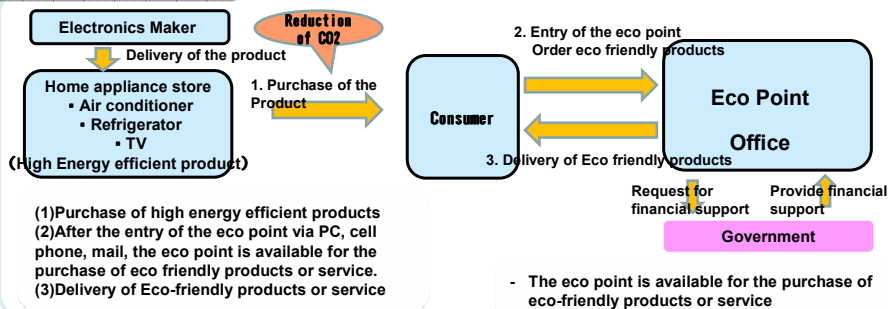
Energy savings at the data-center level

- Optimization of data traffic and storage on networks
- High-efficiency cooling/heat-removal technologies

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[2-1] Promotion of "Green electronics" by using the Eco Point

Framework



Concept of the Eco Point

- About 5% of the purchase price of "Green electronics" (energy efficient A/C, Refrigerator, TV) is added as the Eco Point
- Extra 5% is added in case of TV (for the promotion of the digital broadcast)
- Recycling charge is also added to the eco point

Conditions	A/C	Refrigerator	TV
High energy efficient product	5%	5%	5%+5% (for DTV)
In case of recycling	Recycling charge	Recycling charge	Recycling charge

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[2-2] Establishment of the Green IT Award

The Green IT Award was established this year to accelerate Green IT endeavors by industry and academic bodies. The Minister of Economy, Trade and Industry Award, Commerce and Information Policy Bureau Director-General Award, and the Green IT Promotion Council Chairman Award, among others, were presented on September 30.



Energy conservation within the IT field

Minister of Economy, Trade and Industry Award

ECO CENTER energy-saving server, NEC Corporation

Commerce and Information Policy Bureau Director-General Award

Xeon processor, Intel Corporation

Energy conservation using IT

Minister of Economy, Trade and Industry Award

Construction and operation of the air-conditioning system at the Sony City Building, Sony Corporation and Sony Life Insurance Co., Ltd.

Commerce and Information Policy Bureau Director-General Award

Lifinity Eco Management System home energy management system, Matsushita Electric Works, Ltd.

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[2-3] Zero-Emissions House (at the Hokkaido Toyako G8 Summit)

The Green IT Promotion Council exhibited the world's most advanced energy-efficient IT and electronic devices at the Zero-Emission House, which was set up at the Hokkaido Toyako G8 Summit.

Examples of exhibits



Wind generator



Solar panels



Fuel cells for household use



OLED lighting



Energy-efficient TVs



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[3] Case 1

Production Item: Air conditioner

Last Year		Current Year	
Company A		Company B	
Production: 1 million units	CO2 Emissions Production process: 100kt-CO2 Operation process in homes: 300kt-CO2	Production: 500 thousand units Decrease in production by 500 thousand units affected by the boom of energy-saving air conditioner.	CO2 Emissions Production process: 50kt-CO2 Operation process: 150kt-CO2
Company B		Company A	
Production: 1 million units	CO2 Emissions Production process: 100kt-CO2 Operation process: 300kt-CO2	Production: 1.5 million units Increase in production by 500 thousand units with launching of energy-saving air conditioner which halves CO2 emissions	CO2 Emissions Production process: 150kt-CO2 Operation process: 225kt-CO2
Total		Total	
Production: 2 million units	CO2 Emissions Production process: 200kt-CO2 Operation process: 600kt-CO2	Production: 2 million units	CO2 Emissions Production process: 200kt-CO2 Operation process: 375kt-CO2

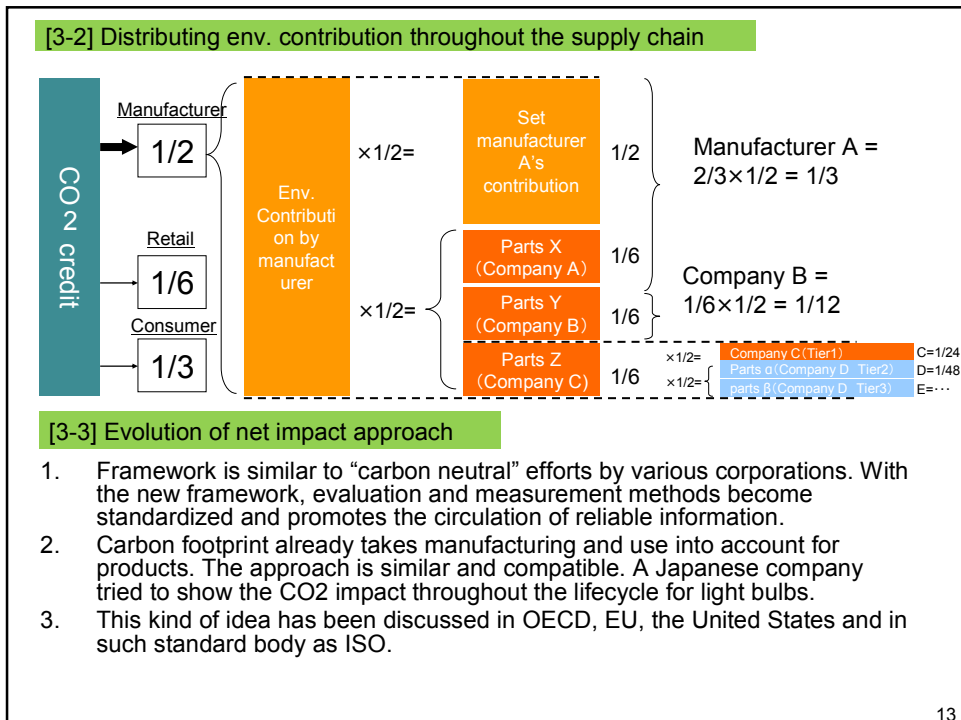
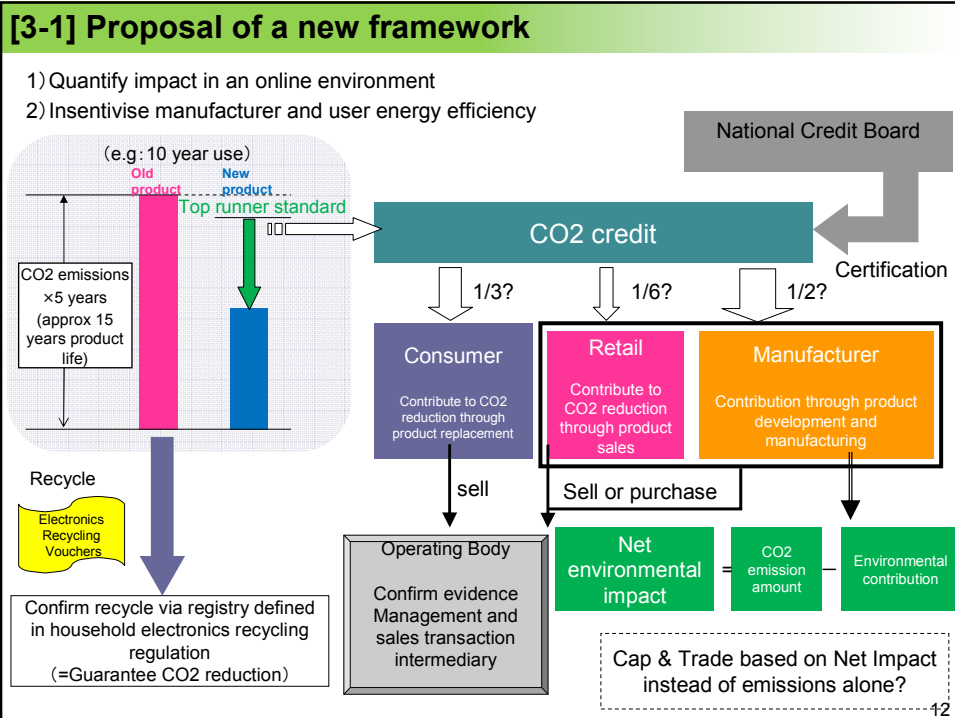
- Point 1** Should Company B need to buy emission credit from Company A?
- Point 2** Is this reduction in CO2 emission allowed to be used by Company B as a credit?

Case 2

Production Item: Air conditioner

Last Year		Current Year	
Company A		Company B	
Production: 1 million units	CO2 Emissions Production process: 100kt-CO2 Operation process in homes: 300kt-CO2	Production: 500 thousand units Decrease in production by 500 thousand units affected by the boom of energy-saving air conditioner.	CO2 Emissions Production process: 50kt-CO2 Use in homes: 150kt-CO2
Company B		Company A	
Production: 1 million units	CO2 Emissions Production process: 100kt-CO2 Operation process: 300kt-CO2	Production: 1.5 million units Increase in production by 500 thousand units through the introduction of energy-saving air conditioner, but the additional production is done in low-efficiency overseas factory.	CO2 Emissions Production(domestic): 100kt-CO2 (overseas): 80kt-CO2 Operation process: 225kt-CO2
Total		Total	
Production: 2 million units	CO2 Emissions Production process: 200kt-CO2 Operation process: 600kt-CO2	Production: 2 million units	CO2 Emissions Production process: 230kt-CO2 Operation process: 375kt-CO2

- Point 3** Is the effect of highly efficient domestic production available as emission credit?
Is the influence of Company B's emission of Company B by shifting production overseas regarded as discredit?
Is it reasonable to levy taxation on import caused by transfer of production basis to a low-efficiency overseas factory?



[3-3] Evolution of net impact approach

1. Framework is similar to "carbon neutral" efforts by various corporations. With the new framework, evaluation and measurement methods become standardized and promotes the circulation of reliable information.
2. Carbon footprint already takes manufacturing and use into account for products. The approach is similar and compatible. A Japanese company tried to show the CO2 impact throughout the lifecycle for light bulbs.
3. This kind of idea has been discussed in OECD, EU, the United States and in such standard body as ISO.

[3-4] Widening the scope to whole life cycle in the future

