

The Results of a Survey on Emissions Trading of Carbon Offsets

In December 2010, the 16th session of the Conference of the Parties (COP 16) to the United Nations Framework Convention on Climate Change (UNFCCC) was held in Cancún, Mexico. After discussions on a post-Kyoto Protocol international framework and state-level efforts, the member states adopted the “Cancún Consensus.” It included an agreement to establish a “Green Climate Fund” that supports developing countries on their measures to address global warming. As for Japan, it kept its target of 25% reduction in Green House Gas (GHG) emissions by 2020 from the 1990 base year, as pledged by the former Prime Minister Hatoyama in 2009, as it considered global warming as one of the most important issues. Taking action to fight global warming is not limited to the governments. Corporations and ordinary citizens have also been making a broad range of efforts to mitigate global warming. One such effort is carbon offset, which is expected to be utilized in various forms.

Receiving cooperation from 11 companies, including those listed below, JBIC conducted a survey on the state of emissions trading on voluntary carbon offsets in 2010 and its future outlook. We hope findings in this report will be useful for corporations and individual citizens interested in carbon offset.

Note that since companies other than those listed below are also engaged in carbon offsetting, the figures shown in this report do not necessarily represent the overall trade transactions taken place in the carbon offset market as a whole.

We also need to inform one caveat. This survey was conducted prior to March 11. Thus its results do not reflect the effects of the Great East Japan Earthquake on the respondents.

Companies responded to the survey questionnaire (alphabetical order):¹

- BNP Paribas Securities, BNP Paribas Bank (Tokyo branch)

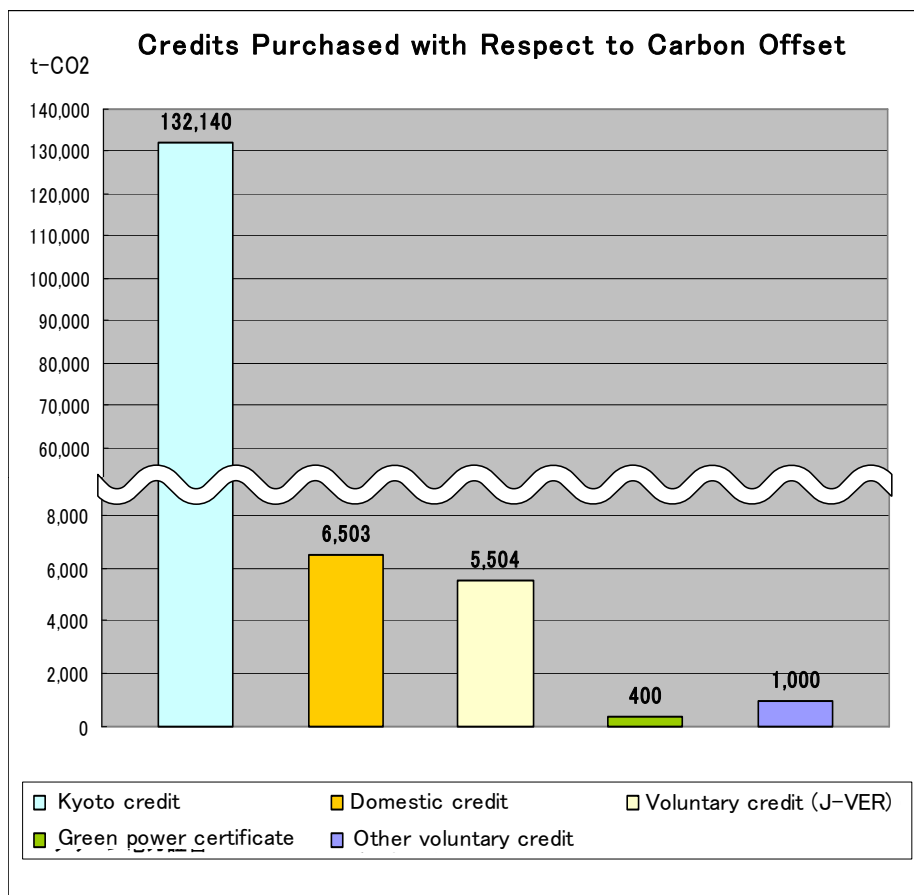
¹ The companies that provided cooperation by responding to the survey differ from those in the previous year. Their responses were also different from those in the previous year's survey.

- Carbon Free Consulting Corporation
- CAC Corporation
- ECONOS Co. Ltd.
- iGUAZU Corporation
- Mitsubishi UFJ Lease & Finance Company Limited
- Recycle One, Inc.
- Smart Energy Co. Ltd.
- Sumitomo Corporation

Summary of Collected Data

1. Performance

(1) The credits for voluntary carbon offsets in this report constitute Kyoto credits, domestic credits, J-VER, Green Power Certificates and other voluntary credits.² In 2010, credits totaling 145,547 CO₂ equivalent tons (t-CO₂) were purchased by companies providing carbon offset services (Offset Providers).³ Kyoto credits accounted for 91% of the total transaction volume, indicating their primary role in the carbon offset market.



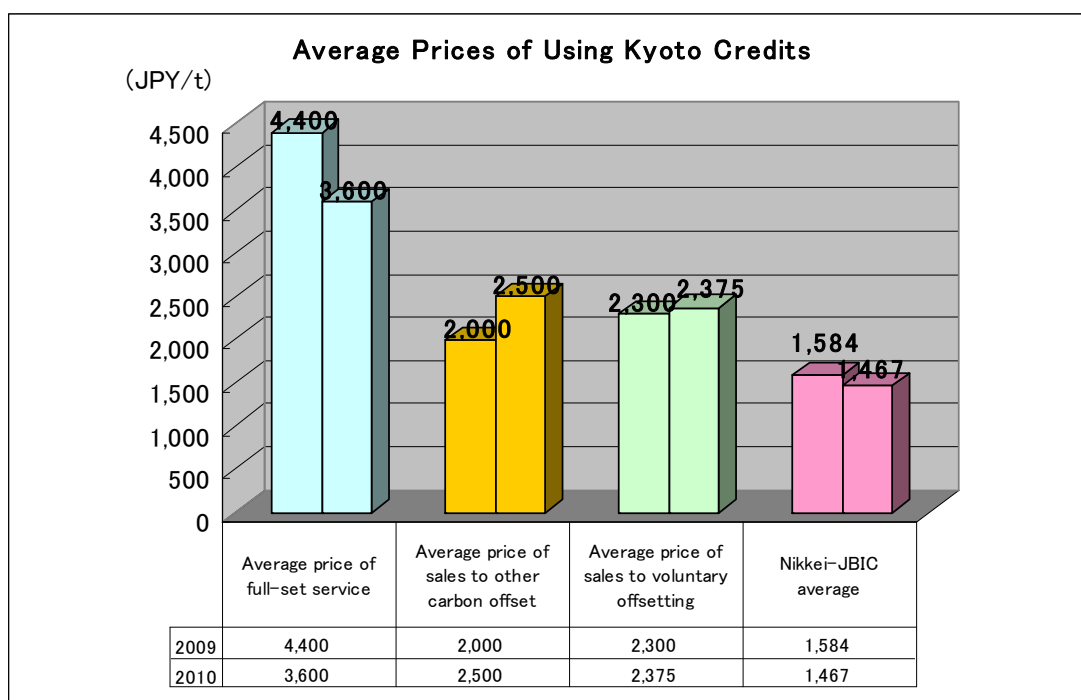
(2) The figure in (1) above indicates the total trading volume of various credits for carbon offset during 2010. It should be noted that there are credits being held as inventories after purchasing them to provide offset service, as all the actual amounts purchased were not necessarily used for carbon offset. The sum of each volume resold

² Other voluntary credits were credits certified by the Verified Credit Standard (VCS).

³ Green Power Certificates use the average CO₂ emissions intensity of all power sources (gross generation output without credits) in fiscal 2008 (0.4 kg CO₂/kWh).

to the companies that offset carbon emissions; resold after converting them into trust beneficiary rights; provided for offset service; provided as offset products; and used to offset carbon by the purchased companies by themselves amounted to 125,091 t-CO₂ in 2010. This is a decrease of almost 40% from 202,174 t-CO₂ in 2009.

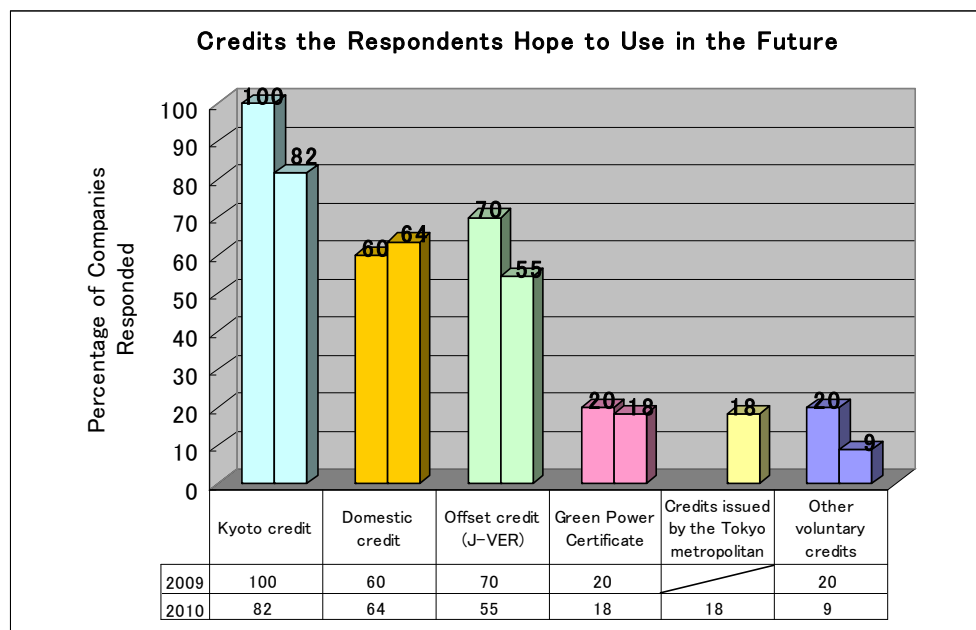
(3) The average price of Kyoto credits differ, depending on the type of service provided, as shown in the Figure below. While the average price of Nikkei-JBIC Carbon Quotation Index (N-J Carbon) was ¥1,467, the average of full-set offset service, which includes credit transfer service, was higher by ¥2,100 than this figure. This seems to be due to the fact that the full-set service price includes service fees and involves small lot transactions. This price was thus higher than those involving large lot transactions. The average price of credits resold to other offset providers or voluntary carbon offsetting companies increased by ¥900 to ¥1,000.⁴ This is largely attributable to small lot transaction and the fact that the type of projects and the source of emissions reduction have to be shown for the credits used for offsets.



⁴ The average price of sales to other carbon offsetting companies was somewhat higher than the average price of voluntary carbon offsetting companies. This seems to be caused by the small sample used.

2. Outlook

- (1) One third of the companies responded that the carbon offset market “will expand in 2011,” while another one third gave a view that it “will remain unchanged,” with the remaining one third answering, “it will shrink.” The reasons for this are: Negotiation for the post-Kyoto Protocol framework continued to drag on with difficulty at COP16, causing the individual respondents to have somewhat differing views on the future of the carbon offset market. And yet, a number of companies expected that the market would remain the same in size or expand in some form or another.
- (2) As indicated by the Figure below, the preferred credits to be used for carbon offsets are primarily Kyoto credits. However, there was growing interest in “domestic credits”, as well as the new credits issued by the Tokyo metropolitan government and other local governments.
- (3) 80% of the respondents considered that they were considering the use of forestry credits in the future, indicating a broader awareness of forestry credits (See Survey Results 7 below). The respondents largely expressed interest in credits based on forestry CDM and J-VER, and credits involving international organizations or official institutions. This indicates that there is room for growth in voluntary credits offered by the private firms. When using forestry credits, many companies seem to pay attention to what the project is about and its feasibility, as well as prices of the credits.



Survey Results

1. Credits purchased with respect to carbon offsetting⁵

Type of credit	Purchase amount	(Prev. year)	Number of Relevant companies	(Prev. year)
Kyoto credit	132,140 t-CO ₂	721,164 t-CO ₂	11	10
Domestic credit	6,503 t-CO ₂	3,642 t-CO ₂	4	4
Voluntary credit (J-VER)	5,504 t-CO ₂	1,000 t-CO ₂	6	1
Green power certificate	400 t-CO ₂ ⁶	762 t-CO ₂	1	2
Other voluntary credit ⁷	1,000 t-CO ₂	6,000 t-CO ₂	1	2

2. Kyoto credits

(1) Companies from which Kyoto credits were purchased with respect to carbon offsetting

Seller	Purchase amount	(Prev. year)	Number of relevant companies	(Prev. year)
Japanese company (Secondary)	47,000 t-CO ₂	137,500 t-CO ₂	6 ⁸	6
Non-Japanese company (Secondary)	80,140 t-CO ₂	448,650 t-CO ₂	6 ⁹	6
Non-Japanese company (Primary)	Unclear ¹⁰	135,014 t-CO ₂	2	4

⁵ Multiple responses.⁶ Green power certificates use CO₂ emissions intensity (gross generation output without credit) set in fiscal 2008 (0.4kg CO₂/kWh) as defined by The Federation of Electric Power Companies of Japan.⁷ Other voluntary credits are credits certified by VCS.⁸ Three of these companies had no response about the volume.⁹ One of these companies had no response about the volume.¹⁰ No response about the volume

(2) Use of purchased Kyoto credits (in 2010)

Use	Amount	(Prev. year)	Number of relevant companies	(Prev. year)
Sales to offset providers	16,100 t-CO2	23,000 t-CO2	4	3
Sales to carbon offsetting companies	0 t-CO2	73,000 t-CO2	3	5
Sales to carbon offsetting companies and individuals after converting into trust beneficiary rights	45,000 t-CO2	65,150 t-CO2	1	2
Provision of full-set services	77,718 t-CO2	64,014 t-CO2	5	5
Provision of carbon offset products	940 t-CO2	10 t-CO2	3	2
Use for offsetting company's activities	1,433 t-CO2	0 t-CO2	3	0
Unused offsets	1,286 t-CO2	40,000 t-CO2	2	2
Other	3,000 t-CO2	450,000 t-CO2	1	0

(3) Transportation volume of Kyoto credits to retirement account or cancellation account

Account receiving the transfer	Volume	Number of relevant companies
Retirement account	46,966 t-CO2	5
Cancellation account	39,300 t-CO2	3

(4) Prices of full-set services (Kyoto credits)

Average¹¹ : ¥3,600

(5) Prices of sales to offset providers (Kyoto credits)

Average: ¥2,500

(6) Prices of sales to carbon offsetting companies (Kyoto credits)

Average: ¥2,375

3. Domestic credits

(1) Use of domestic credits¹²

Use	Amount	Number of relevant companies
Sales to offset providers	0 t-CO2	0
Sales to carbon offsetting companies	Unclear ¹³	1
Provision of full-set services	2,500 t-CO2	2
Provision of carbon offset products	69 t-CO2	1
Use for offsetting company's activities	1,573 t-CO2	1
Unused offsets	0 t-CO2	0
Other	0 t-CO2	0

¹¹ Weighted average price calculated regarding "Under ¥3,000" as ¥2,000, "¥3,000 or above and under ¥4,000" as ¥3,500, "¥4,000 or above and under ¥5,000" as ¥4,500, and "¥5,000 or above" as ¥6,000. The same applies to the average prices of sales to offset providers and carbon offsetting companies.

¹² Multiple answers were allowed.

¹³ No response about the volume

4. Green power certificates

(1) Electrical energy volume by power generation method related to purchased Green power certificates

Power generation method	Electrical energy volume	(Prev. year)	Number of relevant companies
Wind power	1000000 kWh	906,000	1 ¹⁴
Photovoltaic	0 kWh	0	0
Solar thermal	0 kWh		0
Geothermal	0 kWh	0	0
Hydraulic power	0 kWh	0	0
Biomass	0 kWh	1,000,000	0
Mixed combustion of fossil fuels and Biomass	0 kWh	0	0

(2) Use of Green power certificates

Use	Amount	(Prev. year)	Number of relevant companies	(Prev. year)
Provision of carbon offset products	0 kWh	Unclear ¹⁵	0	1
Sales to offset providers	0 kWh	0	0	0
Sales to carbon offsetting companies and individuals	0 kWh	0	0	0
Use for offsetting company's activities	Unclear ¹⁶	906,000	1	1
Unused offsets	0 kWh	Unclear ¹⁷	0	1
Other	0 kWh	0	0	0

¹⁴ Average purchase price was below ¥5,000.

¹⁵ No response about the volume

¹⁶ No response about the volume

¹⁷ No response about the volume

(3) Electrical energy volume and power generation methods related to purchased Green power certificates used for Provision of carbon offset products

No response

(4) Electrical energy volume and power generation methods related to purchased Green power certificates used for Sales to offset providers

No response

(5) Electrical energy volume and power generation methods related to purchased Green power certificates used for Sales to carbon offsetting companies and individuals

No response

5. Outlook in 2011

(1) Prospects of purchasing credits

Prospect	Number of relevant companies	(Previous year)
Decrease from 2010 level	4	1
Similar to 2010 level	2	2
Increase from 2010 level by less than 50%	3	6
Increase from 2010 level by 50% or more	1	1

(2) Reasons cited for “Decrease from 2010 level”¹⁸

Reason	Number of relevant companies
Economic recession	2
Dwindling interest in carbon offsets	3
Uncertainty about the domestic emission trading scheme	2
Other	0

¹⁸ Multiple responses

(3) Expectations on carbon offsets¹⁹

Expectations	Number of relevant companies	(Prev. year)
Differentiated services and products, and enhancement of brand power	5	5
Appeal on company's CSR activities	5	5
Contribution to Japanese goal of GHG emissions reduction	5	4
Contribution to global goal of GHG emissions reduction	6	4
Raising citizens' environmental awareness	5	6
Other ²⁰	1	1

6. Credits the respondents hope to use in the future

(1) Credits the respondents hope to use in the future (provided they are adequately available and supplied at prices similar to Kyoto credits)²¹

Type of credit	Number of relevant companies	(Prev. year)
Kyoto credit	9	10
Domestic credit	7	6
Voluntary credit (J-VER)	6	7
Green power certificate	2	2
Credit by Tokyo Metropolitan Government	2	
Other Voluntary credit	1	2

¹⁹ Multiple responses

²⁰ Including the improvement of incentives for offset providers and compatibility ensured among of credits in different schemes.

²¹ Multiple responses

(2) Credits the respondents expect to actually use ²²

Type of credit	Number of relevant companies	(Previous year)
Kyoto credit	9	10
Domestic credit	6	6
Voluntary credit (J-VER)	5	6
Green power certificate	2	2
Credit by Tokyo Metropolitan Government	2	
Other voluntary credit ²³	1	2

7. Forestry credits

(1) Interest in forestry credits

Level of interest	Number of relevant companies
Want to use if available	8
Not interested	2

(2) Forestry credits the respondents have interest in²⁴

Type of credit	Number of relevant companies
Credit derived from forestry CDM	6
Credit derived from J-VER	6
Credits related to international and public Institutions	5
Voluntary credits derived from private company's approach other than those listed above	0

²² Multiple responses

²³ VCS

²⁴ Multiple responses

(3) Points to take notice in use²⁵

種類	Number of relevant companies
Content and feasibility of project	7
Operator(s) of project	4
Region implementing project	4
Institutional Operator(s)	3
Price	6
Other	0

(4) Preferred price range

Price (per t-CO ₂)	Number of relevant companies
Under ¥1,000	0
Under ¥1,500	1
Under ¥2,000	1
Under ¥2,500	1
Under ¥3,000	1
Under ¥5,000	2
Under ¥10,000	1
Over ¥10,000	0

²⁵ Multiple responses

Nikkei-JBIC Carbon Quotation Index in 2010

DATE	N-J Carbon	BID	ASK
2010/01/05	1,562.5	1445.5	1679.5
2010/01/12	1,569.1	1,488.3	1,650.0
2010/01/18	1,552.5	1,454.6	1,650.5
2010/01/25	1,512.4	1,413.3	1,611.5
2010/02/01	1,462.3	1,358.0	1,566.6
2010/02/08	1,445.9	1,340.8	1,551.0
2010/02/15	1,440.3	1,340.6	1,540.0
2010/02/22	1,422.7	1,318.3	1,527.1
2010/03/01	1,442.3	1,337.0	1,547.7
2010/03/08	1,501.5	1,411.5	1,591.5
2010/03/15	1,449.6	1,355.8	1,543.4
2010/03/23	1,445.3	1,338.4	1,552.2
2010/03/29	1,450.4	1,390.2	1,510.7
2010/04/05	1,508.8	1,441.6	1,576.0
2010/04/12	1,555.1	1,483.0	1,627.3
2010/04/19	1,640.4	1,560.6	1,720.3
2010/04/26	1,705.6	1,640.5	1,770.7
2010/05/06	1,695.1	1,645.7	1,744.5
2010/05/10	1,606.9	1,547.8	1,666.0
2010/05/17	1,550.1	1,485.6	1,614.6
2010/05/24	1,402.1	1,338.8	1,465.4
2010/05/31	1,428.7	1,366.6	1,490.8
2010/06/07	1,417.3	1,357.0	1,477.6
2010/06/14	1,457.5	1,397.2	1,517.8
2010/06/21	1,496.4	1,435.6	1,557.2
2010/06/28	1,463.4	1,404.2	1,522.6
2010/07/05	1,440.0	1,382.2	1,497.8
2010/07/12	1,382.0	1,323.4	1,440.6
2010/07/20	1,402.4	1,347.8	1,457.0
2010/07/26	1,365.9	1,307.6	1,424.2
2010/08/02	1,369.6	1,312.2	1,427.0
2010/08/09	1,381.0	1,322.8	1,439.2

2010/08/16	1,356.1	1,303.6	1,408.6
2010/08/23	1,473.7	1,416.4	1,531.0
2010/08/30	1,473.5	1,417.2	1,529.8
2010/09/06	1,518.0	1,462.2	1,573.8
2010/09/13	1,482.8	1,426.4	1,539.2
2010/09/21	1,519.3	1,465.8	1,572.8
2010/09/27	1,537.4	1,479.6	1,595.2
2010/10/04	1,569.4	1,511.4	1,627.4
2010/10/12	1,610.8	1,556.6	1,665.0
2010/10/18	1,556.7	1,491.0	1,622.5
2010/10/25	1,474.2	1,416.6	1,531.8
2010/11/01	1,415.6	1,357.4	1,473.8
2010/11/08	1,410.7	1,352.6	1,468.8
2010/11/15	1,402.4	1,345.4	1,459.4
2010/11/22	1,425.4	1,367.0	1,483.8
2010/11/29	1,382.7	1,318.7	1,446.7
2010/12/06	1,301.5	1,246.0	1,357.0
2010/12/13	1,310.1	1,253.8	1,366.4
2010/12/20	1,316.0	1,259.0	1,373.0