

AN ANALYSIS ON THE DEVELOPMENTS OF VOLUNTARY EMISSION REDUCTION CREDIT SYSTEMS IN JAPAN

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Overview

In Japan, various efforts of global warming measures to achieve the reduction target of Kyoto Protocol were made eagerly. One of such efforts was the introduction of voluntary emission reduction credit systems. From 2008, the Japan-Verified emission reduction (J-Ver) system was started mainly for the purpose of producing emission reduction credits to use for carbon offset activities. Also from 2008, the domestic version of clean development mechanism (CDM) was started mainly for the purpose of produce credits to use the voluntary action program in the large-scale industries. After the ending of the first commitment period of Kyoto Protocol, these systems were integrated to the Japan Credit (J-Credit) system in 2013.

In December 2015, the Paris agreement on post Kyoto GHGs reduction was finally approved by many countries including various developing countries. The specific character of Paris Agreement is a flexible setting of the target for reducing or mitigating GHGs emissions. In May 2016, Japanese Government has authorized the new target of GHGs reduction to achieve 26% reduction from the emission level in 2013 up to 2030. In addition, Japan need to intensify GHGs reduction measures, because she already comitted 50% (or 80%) reduction of GHGs in 2050 in the long-run.

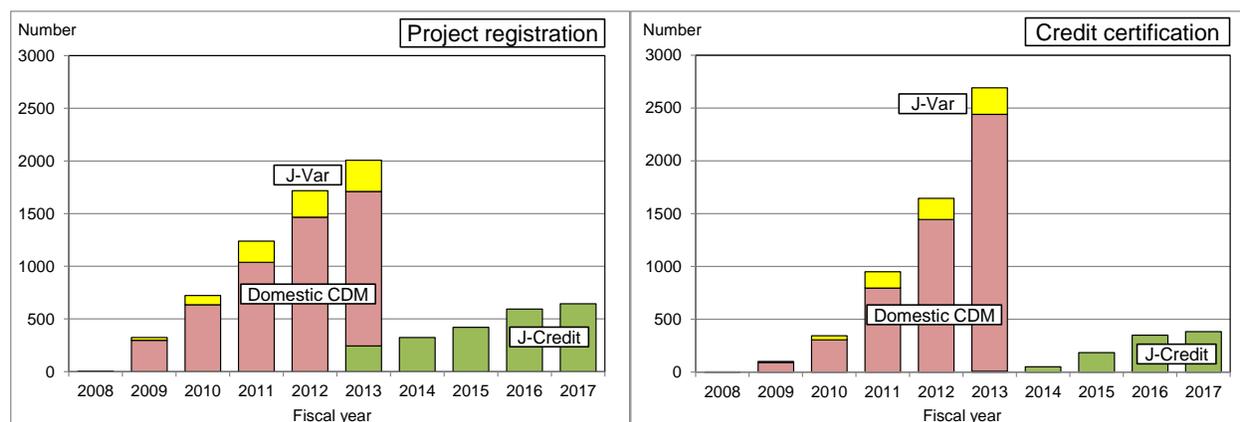
Therefore, the voluntary emission reduction systems will be one of important options to achieve the GHGs reduction target in Japan from now on. In this paper, I made an analysis on the development of voluntary emission reduction systems in Japan by focusing especially on the situations of J-credit system integrated after 2013, because it seemed that the activities of this system have not been always vital up to now but this system will be indispensable for users in the demand side to join GHGs reduction activities positively.

Methods

First, I surveyed historical changes in the cumulative dealing numbers and the cumulative reduction amounts of the project registrations and of the credit certifications by the individual voluntary systems since 2008. I gathered various data on the J-Ver, domestic CDM and J-credit system as widely as possible [1~4] and linked these data continuously.

Second, I made an analysis on changes in the reduction size of individual projects and the players' structure of individual projects, respectively, through the J-Ver, domestic CDM and J-credit system. I checked what were key specific characteristics in the transition from the J-Ver and domestic CDM systems to the J-Credit system.

Finally, I discussed the present problems and future subjects on the futher development of voluntary emission reduction system in Japan.



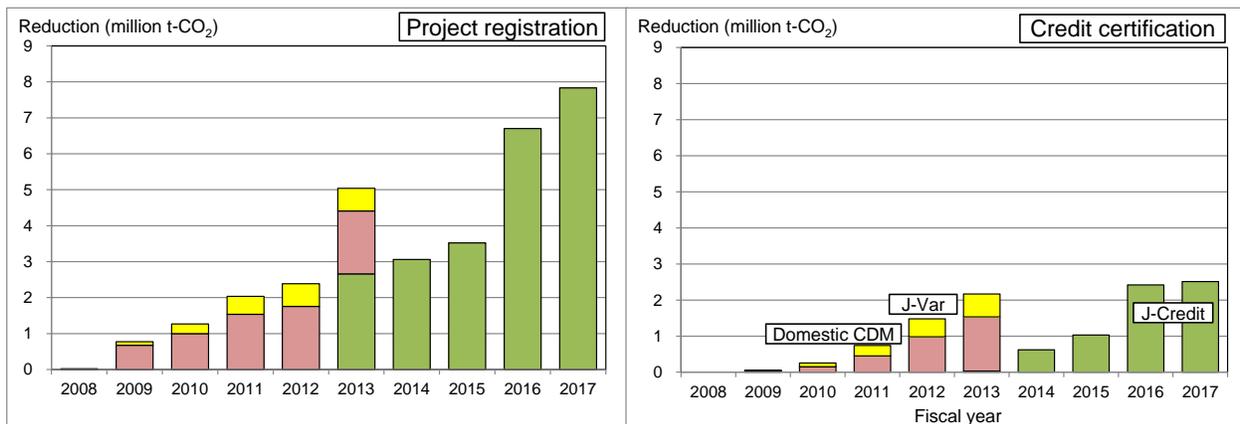
(Source) Made from various data provided by METI and Ministry of Environment in Japan

Fig. 1 Changes in the cumulative numbers of project registrations and credit certifications by the voluntary system

Results

Fig. 1 shows historical changes in the approved cumulative numbers of emission reduction projects in the step of project registration and in the step of credit certification. As shown in Fig. 1, the cumulative numbers increased largely as for the domestic CDM system up to 2012, compared with the J-Ver and the later J-Credit systems. This increasing trend was considered to be brought by the needs of credits for the voluntary action program by large size companies and for the offset uses.

Fig. 2 shows historical changes in the approved cumulative reduction amounts in the step of project registration and in the step of credit certification through various voluntary systems. As shown in Fig. 2, the cumulative reduction amount also largely increased as for the domestic CDM system up to 2012 which was the ending of the first commitment period of Kyoto Protocol. In addition, the cumulative reduction amounts of the project registrations by the later J-Credit system also continued to increase from the same level, though the corresponding cumulative numbers dropped from the level of the domestic CDM systems. Furthermore, the cumulative reduction amounts by the J-Credit system increased sharply in 2016.



(Source) Made from various data provided by METI and Ministry of Environment in Japan

Fig. 2 Changes in the cumulative reduction amount of project registrations and credit certifications by the voluntary system

The cumulative numbers of project registrations by the J-Credit system dropped sharply from the level of the domestic credit system, and thus, it seemed that the activities of the J-Credit system have not been always vital. However, judging from changes in the cumulative reduction amounts, the reduction amount size per project is considered to become larger compared with the case of domestic CDM system. Because of the ending of the first commitment period of Kyoto Protocol, it is worried that the activities of voluntary system may be reduced sharply. However, the changes in the cumulative reduction amounts of the project registrations by the J-Credit system shows that this fear would be groundless.

Conclusions

First, the voluntary emission reduction systems such as J-Ver and domestic CDM started from 2008. Especially the expansion of domestic CDM system was remarkable up to 2012 which was the end of Kyoto Protocol due to the needs for the voluntary action program by large size companies.

Second, the activities of J-Credit system integrated from two preceding systems was worried to drop sharply due to the post Kyoto. However, the cumulative reduction amounts of the project registrations by the J-Credit system shows that this fear would be groundless.

Third, the cumulative reduction amounts by the J-Credit system increased drastically in 2016. The recent movements of REN100 (100% renewable energy) is possible to influence to this increase. The similar movement was also observed in the activities of green electricity certification in Japan and these facts would be quite crucial.

References

- [1] Ministry of Environment, "Details of the Offset Credits (J-VER) system" April 2012.
- [2] METI, "Domestic Credit (CDM) system," July 2008.
- [3] METI, "Details of the Domestic Credit (CDM) system," May 2014.
- [4] METI, "Document on the fifteenth J-Credit Management Committee," December 2011