JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Examination of Green Credits in the Indian Carbon market

By – Dr. Souvik Chatterji(Head of the Department of Law, JIS University, Calcutta), Surajit Chatterjee(LL.M in Corporate Laws at JIS University, Calcutta) and Samrat Samaddar(BBA LL.B(H) student at JIS University, Calcutta)

Abstract:

There is a monitoring mechanism in Indian carbon market. The obligated entity in consultation with Accredited Carbon Verification Agency, shall put in place transparent, independent and credible monitoring and reporting arrangements (monitoring plan) for GHG emissions and production for compliance with GHG emissionsintensity targets. The obligated entity shall monitor greenhouse gas emissions based on themonitoring plan and shall submit the plant to the Bureau within 3 months from the commencement of a compliance cycle, taking into account the nature and functioning of the entity. The monitoring plan shall contain at least the following:

(i) Description of activities carried out at entity's plant to be monitored, a list of emissionsources and sources stream to be monitored.

(ii) A simple diagram highlighting the emission sources, source stream, metering points, sampling points and metering equipment.

(iii) Information on traceable and verifiable reference of activity data such as energy consumption and other conversion factors.

(iv) A description of the written procedure for data flow and control activities.

(v) A description of the sampling procedure for fuel and other materials as required.

(vi) A description of the internal and external testing procedure for fuel and other materialsas required.

The paper looks into all these aspects.

Introduction:

In India, the obligated entity shall report both direct energy, non-energy and indirect energy related GHG emissions from its boundary. The obligated entity shall calculate the emissions using the standard methodology where the activity data representing the quantityof fuel consumed for a particular emission source. The obligated entity if using renewableenergy at their premises through onsite generation, and offsite procurement through open access or through dedicated power purchase agreement or by Green Tariff shall beconsidered as energy input with zero emissions. The obligated entity if claiming such benefits shall by means of necessary documentation such as contracts and agreement shalldemonstrate that the energy procured is renewable energy and emission reduction is not double account by the entity and renewable energy generator.

The obligated entity shall subtract the emissions from their overall direct GHG emissions that is not emitted from the entity's operation and emissions are captured, transferred or utilized further by the Carbon Capture Utilisation and Storage process or is used to produce precipitated calcium carbonate in which captured CO_2 is chemically bonded. The obligated entity shall ensure and demonstrate the permeance of captured CO_2 for claiming the reduction. Every obligated entity, within three months of the conclusion of the compliance cycle shall submit the performance assessment document in Form 'A' (as per Annexure VI)[1] covering the performance for the relevant cycle specifying the compliance with GHG emission intensity targets, duly verified together with certificate ofverification in Form 'B' (as per Annexure VII) given by the accredited carbon verificationagency.

The accredited carbon verification agency shall report the results of his assessment in averification report and the said report shall contain:

(i) the summary of the verification process, results of assessment and his opinion along with the supporting documents.

(ii) the details of verification activities carried out in order to arrive at the conclusion and opinion, including the details captured during the verification process and conclusion relating to compliance with GHG Emission norms, increase or decrease in specific GHG emission with reference to the specific GHG emission in the baseline year.

(iii) the record of interaction, if any, between the accredited carbon verification agency andthe obligated entity as well as any change made in his assessment because of the clarifications, if any, given by the obligated entity.

[1] Refer: Detailed Procedure for Compliance Mechanism under CCTS.

If the accredited carbon verification agency identifies any variations, discrepancy, inconsistency, missing information, misrepresentation, data gaps or non-compliance with the rules, the agency' shall document such information and obtain explanations from the obligated entities supported by additional relevant evidence or explanation. The Bureau may on it own, or on receipt of a complaint regarding any error or inconsistency or misrepresentation, within six months from the date of submission of compliance report or within three months from the date of issue of carbon credits certificate, whichever is later, shall initiate action for independent review of compliance report.

The Bureau on satisfying itself about the correctness of verification report, and check-verification report, wherever sought by it, shall submit the report to the NSCICM, based onthe claim raised by the obligated entity in Form 'A', within two months from the last date of submission of said Form 'A', for issuance of carbon credit certificates under section 14AA of the Act and the report shall specify. -

a. the exact number of carbon credit certificates to be issued to the designated consumer and the entitlement to purchase the carbon credit certificates after determining by the following formula:

b. number of carbon credit certificates = (specific GHG emission notified for the respective compliance cycle – specific GHG emission as achieved in the respective compliance cycle)
× production in that compliance cycle.

c. the certification that all the requirements for issue of carbon credit certificates have beencomplied with, by the obligated entity and his entitlement has been certified in theverification report by the accredited carbon verification agency.

After the issuance of Carbon Credit Certificates, the Obligated Entities shall register, within 4 weeks from dated of issue of Carbon Credit Certificates, themselves on the ICM Registry with the objective to get the equivalent CCC credited into the respective ObligatedEntity registry account. The non-obligated entities who want to purchase the CCC on voluntary basis shall also register themselves on the ICM Registry by submitting the relevant details and defined fees as per the procedure defined by the Central Electricity Regulatory Commission (CERC) under the Terms and Conditions for trading of CCC underthe ICM.

GREEN CREDITS

The Ministry of Environment, Forest and Climate Change had issued a notification on12 October 2023[2]. The Green Credit programme is independent of the carbon credit under theCarbon Credit Trading Scheme, 2023 made under the

[2] Vide Notification No. S.O 4458 (E) dated 12 October 2023

Energy Conservation Act, 2001 (52 of 2001), an environmental activity generating green credit may have climate co-benefits, such asreduction or removal of carbon emissions and an activity generating green credit under GreenCredit programme may also get carbon credit from the same activity under the said Scheme.

The objective of the Green Credit Programme is to incentivise environmental positive actions through market-based mechanism and generate green credit, which shall be tradable and made available for trading on a domestic market platform[3]. The green credit programme shall encourage industries, companies and other entities to meet their existing obligations or other obligations under any law for the time being in force, and encourage other persons and entities, to undertake voluntary environmental measures referred to in rule 4 by generating or buying green credit.

Any person or entity may take any measure specified under sub-rule (2) for the purposesof protection, preservation, or conservation of the environment, namely:—

(i) tree plantation—to promote activities for increasing the green cover across the country;

(ii) water management—to promote water conservation, water harvesting and water useefficiency or water savings, including treatment and reuse of wastewater;

(iii) sustainable agriculture—to promote natural and regenerative agricultural practices andland restoration to improve productivity, soil health and nutritional value of food produced;

(iv) waste management—to promote circularity, sustainable and improved practices for waste management, including collection, segregation, and environmentally sound management;

(v) air pollution reduction—to promote measures for reducing air pollution and other pollutionabatement activities;

(vi) mangrove conservation and restoration—to promote measures for conservation andrestoration of mangroves;

(vi) Eco mark label development—to encourage manufacturers to obtain Eco mark label for theirgoods and services;

(vii) sustainable building and infrastructure—to encourage the construction of sustainablebuildings and other infrastructure using environment friendly technologies and materials.

[3] Clause 2 of the Green Credit Notification No. S.O 4458 (E) dated 12 October 2023.

The Indian Council of Forestry Research and Education, a Society registered under theSocieties Registration Act, 1860 (21 of 1860) vide Registration No.596/1990-91, dated the 12thMarch, 1991 and an autonomous body as declared by the then Ministry of Environment and Forests, Government of India vide Resolution No.1-8/89-RT, dated the 22nd June, 1990, shallbe the Administrator under the Green Credit Rules[4]. The Administrator shall be responsible for the effective implementation of the Green Credit programme and shall be responsible for the following:

(a)develop guidelines, processes and procedures for the implementation of the green credit programme under these rules;

(b) develop methodologies, registration process, guidelines and associated measurement,reporting and verification mechanism;

(c)establish methodologies and processes for issuance of green credit (including issuance of digital green credit), and equivalence of green credit generated from each identified activity;

(d) develop guidelines for the establishment and operation of the Green Credit Registry and trading platform; for self-certification or third-party certification for the registration of an activity for issuance of green credits and its inspection and verification by designated agency,for empanelment of auditors and audit by such auditors;

(e)establish or designate the Green Credit Registry, and trading platform service provider in accordance with the approved guidelines;

(f) develop guidelines for the green credit programme portal, the knowledge and data platform,and for the fees from the registered entities;

(g) develop guidelines for filing of annual returns and progress reports by designated agency,Registry, trading platform and knowledge and data platform;

(h) develop guidelines for the market stability mechanism for trading of green credit.

(i) regulate matters relating to trading of green credit certificates and to safeguard interest of sellers and buyers; and take preventive and corrective actions to prevent fraud or mistrust.

The activities of the Administrator under the Green Credit Rules are similar to the Regulator under the Carbon Credit Trading Scheme. The Administrator or designated agency shall establish and maintain a Green Credit Registry[5] for the registration and issuance of each GreenCredit. The Administrator shall establish and maintain a trading platform with the approval ofthe Central Government[6]. The trading platform shall perform functions regarding the trading of green credit, in accordance with the guidelines made by the Administrator with the approval of the Central

[4] Refer Clause 7 of the Green Credit Notification No. S.O 4458 (E) dated 12 October 2023.
[5] Refer Clause 10 of the Green Credit Notification No. S.O 4458 (E) dated 12 October 2023
[6] Refer Clause 11 of the Green Credit Notification No. S.O 4458 (E) dated 12 October 2023

Government.

The Central Government, based on the recommendations of the Administrator, may constitute Technical Committees for each activity which shall assist the Administrator in implementation of the Green Credit programme under these rules. Technical Committee shalldevelop and make recommendations to the Administrator which will inter alia include—

(a)methodology for calculation of one unit of Green Credit, on the basis of equivalence of resource requirement, parity of scale, scope, size and other relevant parameters required to achieve the desired environmental outcome;

(b) mechanism for registration, verification, evaluation, measurement and reporting process inrespect of each activity.

While many functions and rules are yet to be framed given that the issue of forest is sensitive as there is a pending PIL before the Hon'ble Supreme Court[7].

It is abundantly clear that the world must come together to fight climate change and that is not limited to shutting down industries or reducing reliance on fossil fuels. Historically,the developed nations have reached their position by wanton abuse of environment by usurpingresources from its colonies with scant care of the aftereffects. In this context, we can draw an allegory to Republic of Nauru, a small island country in Micronesia which got independence in 1968. It had huge deposits of phosphate and owing to over extraction, the nation is left as former shell relying on Australian Government at the present stage.

The history of Nauru shows us that the world must come together to fight climate change but it cannot be at the cost of developed nations extracting from the developing nationsand preventing them from development. The developed nations had access to resources after second world war which enabled it to get back on track but the former colonies were struggling.It would be inequitable to levy similar sanctions on developing countries as on developed countries. With Kyoto Protocol, this concept was addressed and developed countries were given commitment targets to meet regarding emission reduction.

While in Europe, permits are disbursed basis the emission targets set by the authoritiesbut it does not address the root problem of reduction of GHG emissions. The industries in developed countries cannot be simply let to purchase

[7] TN Godavaran v. Union of India WP (Civil) No. 171 of 1996.

CERs from carbon offset projects in developing countries and continue to pollute. The principle of "*Polluter pays*" must be made applicable to these industries and there should be a holistic approach to reduce GHG emissionsand not merely offsetting GHG emissions by purchase of CERs. It is inevitable that the developed countries and its industries has higher bargaining power owing to economic disparity. That is why, there should be strong regulatory framework at national levels to addressthe unfair exploitation. In Kenya, there are reports that Ogiek community is being evicted fromtheir ancestral lands in order to obtain carbon credits[8]. Zimbabwe has signed an MOU with Blue Carbon[9], a Dubai based firm, for access to 150,000 sq mile land (which is fifth of the country's land mass) for generating carbon credits. This blatant harm to human rights to indigenous people or neo-colonialism through government lobby is not the correct intent. In both instances, allegations are raised against the nation's governments who are harming the local populace in order to earn from carbon credits. This raises questions on a nation's intent to adhere to the commitment to Kyoto Protocol and also raises questions on the purchasers of such CERs which can be equated as damaging as "blood diamonds". There should be proper checks and balances to ensure that for carbon credits, local people (tribals) etc are not harmedor displaced. The developed countries has to take proper steps to ensure that such activities are strongly discouraged.

India, being part of the UNFCCC, had ratified the Kyoto Protocol. Under the Kyoto Protocol, India promulgated the NCDMA through which carbon sequestration and offset programs could get certified and obtain CERs. Howrah Mills Co. Ltd was one of the first jute mill in India to earn carbon credits under the clean development mechanisms (CDM). The millwas registered under the United Nations Framework Convention on Climate Change (UNFCC)for using green and energy saving technologies in jute production. Howrah mill, despite financial problems, invested Rs 38 lakh to buy a jute biomass fired boiler to cut reducing carbondioxide emissions. The project was registered with UNFCC 2008 and gained 4,112 Carbon Emission Reduction or CERs in the first issuance[10].

Despite having NCDMA, Indian Government had set up the PAT system which had laid down the groundwork for the carbon credit market. The data generated from the PAT system showed many fallacies which we had discussed here, and the Government had taken consideration of the same. The issue of three year cycle was looked into and rectified into annual targets under the Carbon Credit Trading Scheme. The exchange where carbon credits will be traded will be available all year unlike that of the PAT system. By putting annual targets,the entities will be required to check at the end of each year if they are able to meet the target, exceed the target or fail to meet the target. Even otherwise, they can purchase CERs to sell lateron just like Stock market.

[8] https://www.bbc.com/news/world-africa-67352067

[9] https://www.bloomberg.com/news/articles/2023-09-29/zimbabwe-uae-firm-sign-1-5-billion-carbon-credit- financing-mou?utm_content=climate&utm_campaign=socialflow- organic&utm_medium=social&cmpid=socialflow-twitter-climate&utm_source=twitter

[10] https://cdm.unfccc.int/Projects/DB/RWTUV1175258220.62

Under the Carbon Credit Trading Scheme, the entities will have to undertake cap and trade methodology in order to obtain CERs. However, in order to fight climate change, producing CERs is not the viable option as it leads to over-supply and subsequently to prices of CERs dwindle down. The project owners of carbon sequestration or offset require such climate finance to enhance the projects and dwindling prices of CERs will severely impact theactivity.

Carbon Credits do not generate automatically but it take time as it must offset or sequester 1 mT of CO_2 and also adhere to the rules and regulations for accreditation. The industries can sponsor any carbon offset program and obtain CERs produced thereunder as perthe principle of "*Profits a Prendre"*. However, Indian Government had banned export of Carbon Credits but as per Carbon Credit Trading Scheme and Green Credit Scheme, there is no regulation at present which prohibit CERs to be exported or sold to foreign entities. It is very important that the number of participants must increase so that number of CERs producedhas adequate customers. The Government of India also decreed that there shall be a floor pricefor purchase of CERs which would immensely support the project owners. As on date, there are several instances in India wherein project owners are gaining good returns on the carbon sequestration and offset projects[11]; albeit most of the projects are based on agriculture and renewable energy. The advent of Green Credits will help the farmers, given India is an agrarianland, by gaining Green Credits from farming activities.

The Government of India has also revised and issued the National Agro-Forestry Policy2014, whereby it incentives farmers and other land holders to plant trees to grow green cover.Such plantation not only acts as a carbon sink but also helps the land owners to gain Green Credits. Though the laws have recently been notified and there is still time to observe the effectsof the new laws on carbon credits.

SUGGESTIONS:

1. There should convertibility of Green Credits, Carbon Credits, Renewable Energy Credits and ESCerts since a project may come under multiple areas. Byhaving a conversion formula, the project owners can convert and register the instrument for further use.
2. Ensure that there is no double utilization of such CERs. Even if a CER is converted then there should be clear record in the Registry that the CER has been retired. Eg: Green Credits obtained from Afforestation projects if converted to carbon credits, then the Green Credits should be retired from GreenCredits Registry and inducted into the

[11] https://theprint.in/opinion/maharashtra-farmers-making-money-with-carbon-credits-theyre-climate- champions-not-victims/1590687/

Registry under the Carbon Credits Trading Scheme.

3. Use of climate finance to promote and subsidize renewable energy machinery, components. There should be single window for registration of projects under Carbon Credits Trading Scheme and Green Credits.
4. Restrict any kind of neo-colonialism through sponsorship of carbon credits programs. The Government should ensure that there is no human rights violation in any such project.
5. Mandatory filing by industry, especially airline industry, shipping and railwaysfor the steps taken to curb GHG emissions.

Conclusion:

Thus, it is clear from Indian perspective, which has a large diverse population with immense potential for industrial growth and huge natural resources deposits, there should be uniform legal framework to promote GHG emission reduction and also shift to low emission technology. As one the developing nations, there should be a collaborative approach with other countries to promote GHG emission reductions. Any foreign company who sets up any manufacturing plant or carries out any services in India through any subsidiary or otherwise, must adhere to the National Framework for GHG reduction. By having a proper legalframework to register, monitor, and implement an accreditation methodology for certificationcan streamline the Certified Emission Reduction process and the domestic project owners would not be required to run from one Voluntary market to another hoping for a better CER price in international markets. The hypothesis therefore stands proved.

Bibliography

1. Sharma, Ash (2015): Buyer counters crisis: how Norway supports CDM projects atrisk, in: Carbon Market Mechanisms Review 01/2015, p. 9-14, https://www.nefco.org/sites/nefco.org/files/pdffiles/nefco_article_ash_sharma_cmr- 01-2015.pdf.
2. Cames, Martin; Harthan, Ralf; Füssler, Jürg; Lazarus, Michael; Lee, Carrie; Erickson,Peter, Spalding-Fecher, Randall (2016): How additional is the Clean Development Mechanism?, OEKOInstitut, Freiburg
3. Ecosystem Marketplace (2021): Ecosystem Marketplace's State of the Voluntary Carbon Markets 2021. Ecosystem Marketplace, Washington DC.
4. "TASKFORCE ON SCALING VOLUNTARY CARBON MARKETS." Institute of
5. International Finance, January 2021. https://www.iif.com/Portals/1/Files/TSVCM_Report.pdf.
6. Barbara Haya, Danny Cullenward, Aaron L. Strong, Emily Grubert, Robert Heilmayr,
7. Deborah A. Sivas & Michael Wara (2021). Voluntary Registry Offsets Database. Berkeley
8. Carbon Trading Project | CEPP Projects | Center for Environmental Public Policy (CEPP) | Centers | Faculty and

Impact | Goldman School of Public Policy | University of California, Berkeley

9. Blaufelder, Christopher; Levy, Cindy; Mannion, Peter; Pinner, Dickon (2021): Ablueprint for scaling voluntary carbon markets to meet the climate challenge. Mckinsey Sustainability.https://www.mckinsey.com/business-functions/sustainability/our- insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate- challenge.

10. European Commission. EU Emissions Trading System (EU ETS) (2021). https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets_en

11. York, Ingrid; Kerschner, Seth; Smithers, Julia (2020). Voluntary Carbon Markets: A Blueprint. White & Case. https://www.whitecase.com/publications/alert/voluntary- carbon-markets-blueprint