



# Examination Of Growth Of Indian Carbon Market

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## Abstract:

In order to overcome the barriers impeding the growth of the Escerts market and to encourage voluntary entities to contribute towards India's Nationally Determined Contributions (NDC) commitments, the development of a national carbon market within India becomes an imperative. In order for Indian carbon market to commence properly, the existing regulatory framework of PAT system should be brought under the Carbon Market. By making Escerts more fungible, having regular trading hours, changing the auto-expiry of Escerts and involvement of other sectors of the industry as well as connecting to foreign investors would definitely give the PAT system a boost. The paper looks into the National Carbon Market.

## Introduction:

We cannot brush away the PAT system completely. Implementation of PAT cycle –I resulted in energy saving of 8.67 MTOE translating into avoiding of about 31 million tonne of CO<sub>2</sub> emissions<sup>1</sup>. Enhancements in large-scale industrial interventions during PAT Cycles IV and V have led to substantial energy savings. These interventions have collectively resulted in a significant total saving of 1.4317 million tons of oil equivalent (Mtoe). This achievement includes conserving 1.4310 Mtoe in thermal energy and reducing electrical energy consumption by 16.608 billion units (BU), underscoring the success of PAT Cycles IV and V<sup>2</sup>. In order to boost the demand side, it is imperative that the airlines industry and railways should also be brought under the Carbon Market scheme.

<sup>1</sup> [https://beeindia.gov.in/en/programmes/perform-achieve-and-trade-pat#:~:text=Perform%2C%20Achieve%20and%20Trade%20\(PAT\)%20is%20a%20regulatory%20instrument,sa ving%20which%20can%20be%20traded.](https://beeindia.gov.in/en/programmes/perform-achieve-and-trade-pat#:~:text=Perform%2C%20Achieve%20and%20Trade%20(PAT)%20is%20a%20regulatory%20instrument,sa ving%20which%20can%20be%20traded.)

<sup>2</sup> BEE : Impact of Energy Efficiency Measures for the year 2022-23 [Available at: <https://beeindia.gov.in/sites/default/files/publications/files/Impact%20Assessment%202022-23%20FINAL%20Report.pdf> ]

By finalizing the National Carbon Market in India, the domestic players will have certainty in approval of carbon sequestration or removal projects, standardized accreditation methodology and grant of CERs which has fungibility that can be used even by international players. As mentioned before, the Voluntary Carbon Market has multiple methodology for accreditation of CERs. Owing to non-standardization, the carbon sequestration or removal project owners in India are at a loss how to proceed where substantial investments are required for such projects. Furthermore, with the price per CER is volatile which leads to further insecurity to the project managers.

To generate credits, a project developer must undergo a rigorous process to ensure real and quantifiable emissions reductions are achieved. Initially, the developer creates a Project Idea Note, focusing on early-stage preparations such as generating a project plan, assessing feasibility, impacts, and risks, and engaging with local stakeholders. Next, the developer prepares a more detailed Project Design Document, outlining the anticipated emissions reductions, plans for quantifying and monitoring climate and other social and environmental benefits, and demonstrating that the project's activities exceed "business-as-usual" reductions (additionality requirement) and avoid emissions leakage. These plans and assumptions are then validated by a third-party auditor. After the project has been implemented and monitored over a period, a verification audit assesses the delivery of greenhouse gas mitigation. Only after successfully passing each of these steps can the project developer issue tradeable credits.

Subsequently or simultaneously, Indian industry must accede to Cap-and-Trade system where industrial sectors are ear-marked for only specific amount of GHG emissions. Given that the PAT system also had similar feature, but it was based on reduction of energy consumption in energy intensive industries. In this approach, an entity specific GHG emissions intensity factor (t CO<sub>2</sub>/unit of output) is calculated for the current situation. The expected sectoral growth over the next few years is then used to determine the "business as usual (BAU) emissions" for the scheme's first crediting period, serving as a preliminary reference. To participate, each entity must establish a GHG emissions inventory and an MRV (Monitoring, Reporting, and Verification) scheme. This approach is relatively easy to implement and maintain, as it captures a wide range of measures with a single parameter (t CO<sub>2</sub>/unit of output). It enables large companies to address their entire value chain using a comparatively simple, high-level method.

Since, the PAT system is still operational, it is necessary to link ESCerts to CERs and have a conversion factor attached so that unsold ESCerts can be converted to CERs and sold. Once, an ESCert is converted to CER, the ESCert will be required to be retired and the converted CER registered so as to avoid double – selling or usage. According to the PAT rules, a "cycle" refers to the three-year period allocated to a Designated Consumer (DC) to achieve or exceed the prescribed energy consumption norms and standards. Currently, the issuance and trading of Escerts occur only during a limited duration within each PAT cycle, posing a barrier to the proposed development of a voluntary carbon market. The major limitations associated with this three-year cycle include: Compliance occurs once every three years, resulting in a number of Designated Consumers not participating in specific compliance cycles remaining inactive during trading sessions. With limited participation, the market clearing volume (MCV) and market clearing price (MCP) may not accurately reflect the actual market position.

To address this challenge, the cycle period be changed from three years to yearly. Most other carbon markets (e.g., EU ETS) operate annually, ensuring regular trading of carbon instruments. For the conversion of the three-year compliance cycle to an annual cycle, the same can be achieved as per provisions outlined in PAT rules 2012, clause 12, sub-clause (2). The current PAT regime offers a fully functional mechanism with comprehensive rules for estimating DC-specific targets, normalization factors, issuance, trading, and other relevant regulations.

In addition to the ESCerts, the carbon credit market can be divided into three parts:

- (i) Generation and sale of Certified Emission Receipts (CERs) issued under the United Nations Clean Development Mechanism (UN-CDM);
- (ii) Generation and sale of Verified Emission Receipts (VERs) which are generated by projects which are too small to go through the process of being registered for CERs but which still use clean technology and are eligible to generate carbon credits.
- (iii) Trading in futures contracts for carbon credits in commodity exchanges.

Any project in which there is a realistic possibility of reduction of carbon credits can consider the possibility of generating carbon credits. This includes renewable energy projects such as solar, wind, bio-gas and bio-diesel projects; industries that use sustainable materials like jute; or reduces burning of fuel or use of environment unfriendly materials (e.g. plastics); and environmentally friendly activities such as sustainable waste management, reforestation etc.

India is a signatory to the Kyoto Protocol and therefore Indian projects are eligible to be designated as Clean Development Mechanism (CDM) projects which are registered with the United Nations CDM Executive Board (UNCDM-EB). The designated national authority (DNA) for Indian is the National Clean Development Mechanism Authority (NCDMA). The NCDMA is the single window clearance for approving CER projects in India. The NCDMA has been empowered to evaluate and approve projects in accordance with United Nations guidelines.

In brief, the procedure for obtaining permission to generate and sell CERs is as follows:

- (i) **Initial Feasibility Study.** Any developer can initiate and implement a CDM Project if there exists a emission reduction potential. Such developer then carries out an initial feasibility study to ensure that the project is eligible to generate CERs.
- (ii) **Project Concept Note and PDD.** Once it is determined that the project is capable of generating CERs a Project Concept Note (PCN) and Project Development Document (PDD) are prepared. The PCN includes a complete planning of a project in terms of all required CDM criteria. The PCN is the document which is given to interested parties, investors and buyers.

The PDD is the basic report which gives the project details, site details, GHG reductions and description of the baseline against which the GHG reductions are calculated. The PDD should also outline in detail the methodology which is being adopted for the project which leads to additionality (the project proponents could develop new methodologies for the project or could use of the existing methodologies already approved by the UN). The PDD should also set out the monitoring mechanisms put in place for the project and estimate the number of years for which the project expects to generate CERs. The PDD is required to be a format specified in the Modalities and Procedures for CDM developed by the UN.

The PDD must transparently and clearly describe the baseline against which GHG emissions are measured. The baseline should be precise, transparent and realistic. Wherever possible, the baseline analysis should use historical emission data.



(iii) NCDMA Approval. The developer should submit 1 soft copy of the PCN and the PDD to the NCDMA through an online form. Along with this, 20 hard copies of the PCN and PDD and 2 compact discs of all supporting documents is also required to be submitted. The NCDMA after reviewing these documents asks the developers for qualifications. This is followed by a meeting, where the developer is required to make a presentation to the members of the NCDMA. The members can pose queries to the developer during the presentation. Once all queries are satisfactorily answered, the NCDMA issues the Host Country Approval (HCA) for the project.

(iv) Validation by DOE. Once a project receives the HCA, the project is then evaluated by an independent agency called a Designated Operating Entity (DOE). A DOE is usually an internationally accredited process audit firm designated by the UN for carrying out verification activities for CDM projects. Some active DOEs in India include PriceWaterhouseCooper, TUVSUD South Asia and Societe Generale de Surveillance (SGS). Having evaluated the project, the DOE determines whether it is eligible for registration with the UN-CDM.

(v) UNCDM Approval. After receiving the HCA and submission of the validation report by the DOE, the project is registered as CDM project by the UNCDM-EB. The UNCDM-EB approval for CER projects can take up to 2 years.

(vi) Verification and Monitoring by the DOE. After registration and the project achieving commercial operation, the actual GHG emission by the project is monitored and verified by the DOE.

(vii) Issuance of CERs. The DOE issues the verification report with respect to the activities of the project, and based on the report, the UNCDM-RB issues CERs to the project, which are then credited to the account held by the developer with the UNCDM registry.

In order to be eligible as a CDM Project, the project must meet the following criteria:

(i) Emission Additionality. The project should lead to real, measurable and long term mitigation of carbon emissions. The reduction in carbon emissions is calculated with reference to a baseline.

(ii) Financial Additionality. The project should not be funded by official development assistance.

(iii) Technological Additionality. The CDM project activities should lead to transfer of environmentally safe and sound technologies and know-how. The additionality criteria is calculated in terms of emission reduction, social and economic aspects etc.

## INDIA'S TAKE ON CARBON EMISSION REDUCTION THROUGH REGULATORY FRAMEWORKS

In COP 26<sup>3</sup>, held at Glasgow, United Kingdom; India placed its commitment for GHG reduction through 5-part plan<sup>4</sup>:

- i) Reach 500GW Non-fossil energy capacity by 2030.
- ii) 50 per cent of its energy requirements from renewable energy by 2030.
- iii) Reduction of total projected carbon emissions by one billion tonnes from now to 2030.
- iv) Reduction of the carbon intensity of the economy by 45 per cent by 2030, over 2005 levels.
- v) Achieving the target of net zero emissions by 2070.

India further highlighted that just like UNFCCC tracks progress made in climate mitigation, it should also develop a system that tracks climate finance, or finances involved in reducing GHG emissions. For that purpose, the transfer of climate finance and low-cost climate technologies have become more important for implementation of climate actions by the developing countries. India further proposed LIFE – Lifestyle for Environment where the world needs mindful and deliberate utilization, instead of mindless and destructive consumption.

India emphasized the foundational principles of equity, and common but differentiated responsibilities and respective capabilities. It also highlighted that all countries should have equitable access to the global carbon budget, a finite global resource, for keeping temperature increase within the limits set by the Paris Agreement and all countries must stay within their fair share of this global carbon budget, while using it responsibly. Moving in the same direction, Hon'ble Minister of Power Shri R K Singh held a

<sup>3</sup> COP 26 held at Glasgow, United Kingdom in 2021.

<sup>4</sup> PIB Press Release by Ministry of Environment, Forest and Climate Change [Available at: <https://pib.gov.in/PressReleasePage.aspx?PRID=1795071> ]

virtual meeting with senior government officials and industry partners and announced that India is adding more renewable energy resulting in emissions reduction and thereby reducing millions of tons of CO<sub>2</sub> emissions<sup>5</sup>.

In order to achieve the commitment of 2030, on 08<sup>th</sup> August 2022, India made revisions to its carbon credit policies to ban the export of carbon credits in order to meet its climate goals of reducing 1 BT of carbon by 2030 and achieving net-zero by 2070. The government is planning to increase its share of green energy up to 50% from the current 42% by the end of the decade and become a net exporter of energy in the coming years<sup>6</sup>.

The Government of India planned to launch its National Carbon market and thereby passed the Energy Conservation (Amendment) Bill, 2022. The domestic carbon market will enable the domestic companies to trade carbon credits efficiently and help push through energy transition goals of the government in an effort to combat climate change. The new law will prepare Indian companies for the looming carbon taxes in export markets. A cursory look at the Energy Conservation (Amendment) Bill, 2022 shows that the Government of India proposes to implement a Carbon trading scheme. The central government or any authorised agency may issue carbon credit certificates to entities registered and compliant with the scheme. The entities will be entitled to trade the certificates. Any other person may also purchase a carbon credit certificate on a voluntary basis<sup>7</sup>. As per the Energy Conservation Act, the Ministry of Power will be the nodal Ministry for the regulation of the scheme, and the Bureau of Energy Efficiency under the Ministry of Power will be the implementing agency. As per the Government of India (Allocation of Business) Rules, 1961, the Ministry of Power is responsible for: (i) general policy in the power sector, and issues related to energy policy and coordination, and (ii) energy conservation and energy efficiency pertaining to the power sector. Whereas, the Ministry of Environment, Forest, and Climate Change, which is responsible for the regulation of: (i) **'climate change and related matters'**, (ii) environmental norms.

Normally, trading platforms are regulated by respective sectoral regulators. For example, share and commodity trading is regulated by the Securities and Exchange Board of India (SEBI). Electricity trading is regulated by Central Electricity Regulatory Commission (CERC). The Bill

<sup>5</sup> Press Information Bureau – Ministry of Power - Power Minister calls for enhanced action on energy efficiency by States on 22 Oct 2021 [Available at: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1765860> ]

<sup>6</sup> <https://www.investindia.gov.in/team-india-blogs/indias-evolving-carbon-credit-market>

<sup>7</sup> The Energy Conservation (Amendment) Bill 2022 – Bill Summary [Available at: <https://prsindia.org/billtrack/the-energy-conservation-amendment-bill-2022> ]

does not specify how carbon credit certificates will be traded, or who will regulate such trading. Presently, two key trading schemes are operational in India's energy sector: (i) The Renewable Energy Certificate scheme under the Electricity Act, 2003, aimed at promoting renewable energy, and (ii) The Energy Savings Certificate scheme under the Energy Conservation Act, 2001, focused on promoting energy efficiency. The proposed Bill introduces a tradeable carbon credit certificate to incentivize reducing carbon emissions. The same activity may qualify for multiple schemes separately. For instance, if a power generation company produces renewable energy, it earns a renewable energy certificate. By producing renewable energy, it may also be reducing carbon emissions, thereby potentially entitling it to receive carbon credits. Similarly, all energy-saving measures could qualify as carbon emission reduction measures, as they decrease the required amount of energy generation and, consequently, reduce carbon emissions. However, the Bill does not specify whether these certificates will be interchangeable or not. This we had discussed previously that other forms of energy savings tradable certificates must have a conversion formula in order to give wider flexibility to the holders. The Bill was passed in Lok Sabha on 08 August 2022 and passed by Rajya Sabha on 12 December 2022 and is notified on 20 December 2022.

In the said Amendment Act, carbon credit certificates<sup>8</sup>, and carbon credit trading scheme has been defined but clarity as to which government body will be authorized to carry out such functions. The Amendment Act also defines Registered Entities<sup>9</sup> and it includes Designated Consumers as well. We had mentioned that in order to make the carbon market a success, the number of participants must be increased. Only having domestic parties severely curtails the efficacy and desired monitoring of Climate Finance as it was enunciated in COP 26. The Amendment Act also defines that the Central Government shall specify a carbon credit trading scheme<sup>10</sup> and specify minimum consumption of renewable energy by designated consumers. The Amendment Act allows any person to purchase ESCerts or carbon credit certificates on voluntary basis and that the Government or any agency authorized by it to issue carbon credit certificates<sup>11</sup> to the registered entity who is in compliance with the requirements of the carbon credit trading scheme. The registered entity can purchase or sell carbon credits as per the carbon credit trading scheme.

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<sup>8</sup> Refer section 2 (ii) of the Energy Conservation Amendment Act 2022

<sup>9</sup> Refer section 2 (vi) of the Energy Conservation Amendment Act 2022

<sup>10</sup> Refer section 6 (viii) of the Energy Conservation Amendment Act 2022

<sup>11</sup> Refer section 8 of the Energy Conservation Amendment Act 2022



The Hon'ble Minister of Power Shri R K Singh in a written reply to Lok Sabha had stated that as per the framework laid down by COP; if any carbon credit is sold outside the country; it cannot be used for meeting the NDCs of the originating country. Carbon credit will on priority be used within the country to meet Indian NDCs. In specific cases, where carbon credits are created by high technology expensive assets, these may be permitted to be externally marketed by the National Designated Authority created by Government which shall exercise and perform functions that inter-alia include to receive projects for evaluation and approval of host party<sup>12</sup>.

While the Amendment Act did not specify the regulating authority in charge of implementation of the Carbon Credit Market, it appears that the Government of India in order to show compliance with its commitment made in COP 26 hurriedly made the amendment without laying the framework. Detailed studies have been conducted by the Bureau of Energy Efficiency on the prospects of setting up the National Carbon Market and accreditation agency onboarding. The Ministry of Power and Ministry of Environment, Forests & Climate Change had a stakeholder consultation meeting<sup>13</sup> 11 May 2023. As India currently operates an energy savings-based market mechanism, the new Carbon Credit Trading Scheme will enhance energy transition efforts by expanding its scope to cover potential energy sectors. For these sectors, GHG emissions intensity benchmarks and targets will be developed, aligned with India's emissions trajectory and climate goals. Carbon credits will be traded based on performance against these sectoral trajectories. Additionally, a voluntary mechanism will be developed to encourage GHG reductions from non-obligated sectors.

The Indian Carbon Market (ICM) will create methodologies for estimating carbon emissions reductions and removals from various registered projects and will establish the required validation, registration, verification, and issuance processes to operationalize the scheme. Monitoring, Reporting, and Verification (MRV) guidelines for the emissions scheme will be developed following consultations. A comprehensive institutional and governance structure will be established, detailing the specific roles of each party involved in the execution of the ICM. Capacity building initiatives will be undertaken to upskill all entities in the subject matter. The ICM aims to mobilize new mitigation opportunities through the demand for emission credits from private and public

<sup>12</sup> PIB Press Release – Ministry of Power – Carbon Markets [Available at: <https://pib.gov.in/PressReleasePage.aspx?PRID=1883921> ]

<sup>13</sup> PIB Press Release – Ministry of Power & Ministry of Environment, Forests & Climate Change to develop Carbon Credit Trading Scheme for Decarbonisation [Available at: <https://pib.gov.in/PressReleasePage.aspx?PRID=1923458> ]

entities. A well-designed, competitive carbon market mechanism would enable the reduction of GHG emissions at the lowest cost, both at the entity level and across the entire sector, driving the faster adoption of clean technologies in a growing economy like India.

On 28 June 2023, the Ministry of Power had notified<sup>14</sup>, in exercise of its powers under Clause (w) of section 14 of the Energy Conservation Act, 2001, the Carbon Credit Trading Scheme, 2023. Vide the Scheme, accredited carbon verification agency shall be the agency authorized by the BEE to carry out verification activities under the carbon credit trading scheme. The Scheme also defines the Indian Carbon market framework to be the national framework established with the objective to reduce or remove GHG emissions from the Indian economy through trading of carbon credits. The Notification also sets up a National Steering Committee for Indian Carbon Market in which there will 18 members from various Government Departments (like Power, Forestry, Niti Ayog, Finance, New & Renewable energy, Steel, Coal, Chemicals etc) led by Secretary of Ministry of Power being the Chairman.

The functions of the National Steering Committee<sup>15</sup> shall be as follows:

- a) Recommend to Bureau for the formulation and finalisation of procedures for institutionalizing the Indian carbon market;
- (b) recommend to Bureau for the formulation and finalisation of the rules and regulations for the functions of Indian carbon market;
- (c) recommend to Bureau for the formulation of specific greenhouse gases emission targets for the obligated entities;
- (d) recommend to Bureau for the formulation and finalisation of guidelines regarding trading of carbon credit certificates outside India;
- (e) recommend to Bureau to issue carbon credit certificate;
- (f) recommend to Bureau for the development of the process or conditions for crediting period or renewal or expiry of carbon credit certificate;
- (g) to monitor the functions of Indian carbon market;
- (h) recommend to Bureau to constitute any Committee or Working group as required in connection with Indian carbon market; and

<sup>14</sup> Notification No. S.O 2825 (E) dated 28<sup>th</sup> June 2023

<sup>15</sup> Refer Clause 4 of the Carbon Credit Trading Scheme 2023.

(i) any other functions assigned to it by the Central Government.

The Bureau of Energy Efficiency has been made the administrator for the Indian Carbon Market and shall discharge the following functions<sup>16</sup> as per the Carbon Credit Scheme 2023:

- (a) to identify sectors and potential for reduction of greenhouse gases emissions in such sectors and recommend to the Ministry of Power to include such sectors in Indian carbon market;
- (b) to develop trajectory and targets for the entities under compliance mechanism;
- (c) to issue the carbon credits certificate based on the recommendation of the National Steering Committee for Indian carbon market and subsequent approval of the Central Government;
- (d) to develop market stability mechanism for carbon credits;
- (e) to develop the procedure for accreditation and functions of accredited carbon verification agency;
- (f) to accredit the agencies in accordance with the approved procedure for accredited carbon verification agency;
- (g) to determine, the fees and charges payable by the registered entities with the approval of Central Government, for the purposes of meeting the cost and expense towards the implementation of this Scheme;
- (h) to develop the process or conditions for crediting period or renewal or expiry of carbon credit certificates;
- (i) to develop data submission formats, forms for effective functioning of Indian carbon market;
- (j) to undertake capacity building activities for the stakeholders;
- (k) to develop and maintain the information technology infrastructure including the user guidance platform required for Indian carbon market;
- (l) to maintain secure database with all security protocols as approved by the Central Government.
- (m) to constitute any Committee or working group as recommended by the National Steering Committee for Indian carbon market; and
- (n) any other functions assigned to it by the Central Government.

The Scheme also lays down that the Grid Controller of India Limited shall act as the registry for the Indian Carbon Market<sup>17</sup>. As the registry it shall carry out the following functions:

- (a) to comply with the directions issued by the Bureau from time to time;
- (b) to undertake registration of obligated or non-obligated entities;
- (c) to maintain secure database with all security protocols;

<sup>16</sup> Refer Clause 5 of the Carbon Credit Trading Scheme 2023.

<sup>17</sup> Refer Clause 6 of the Carbon Credit Trading Scheme 2023

- (d) to maintain records of all transactions;
- (e) to share the transaction records with Power Exchange and Bureau;
- (f) to assist in development of information technology platform for maintaining database of carbon credit certificates;
- (g) to function as meta-registry for India;
- (h) to establish linkages with other National or International registries as approved by the Central Government; and
- (i) any other functions assigned to it by the Bureau.

The Central Electricity Regulatory Commission shall be the regulator<sup>18</sup> for the trading activities under the Indian Carbon Market and shall undertake the following functions:

- (a) to regulate matters relating to trading of carbon credit certificates;
- (b) to safeguard interest of both sellers and buyers;
- (c) to regulate frequency of carbon credit certificates trading; and
- (d) to provide market oversight and take necessary preventive and corrective actions to prevent fraud or mistrust.

Just like SEBI regulates the securities market of India, CERC has been given the authority to act as the regulator and empowered to regulate the matters relating to carbon credit certificates and more importantly take preventative measures and corrective measures to prevent fraud or mistrust. In addition to the same, CERC<sup>19</sup> shall also register the power exchanges and approve the carbon credit certificate trading in the Indian carbon market, from time to time. The power exchanges shall seek approval from the CERC for respective by-laws for trading of carbon credits and shall perform functions regarding trading of carbon credit certificates, in accordance with the regulations notified by the CERC.

The industrial sectors and the obligated entities to be covered under the Scheme shall be decided by the Ministry of Power with the recommendation of the Bureau of Energy Efficiency<sup>20</sup>. The Ministry of Power, after duly considering the recommendations of Bureau and National Steering Committee for Indian carbon market, shall recommend the notification of greenhouse gases emission intensity

<sup>18</sup> Refer Clause 7 of the Carbon Credit Trading Scheme 2023

<sup>19</sup> Refer Clause 10 of the Carbon Credit Trading Scheme 2023

<sup>20</sup> Refer Clause 11 of the Carbon Credit Trading Scheme 2023



targets to the Ministry of Environment, Forest and Climate Change for notification under the Environment Protection Act, 1986. The obligated entities shall be required to achieve greenhouse gases emission intensity in accordance with the targets as may be notified by the Ministry of Environment, Forest and Climate Change. The obligated entities shall also be required to meet any other targets such as use of renewable energy consumption or specific energy consumption as may be notified by the Ministry of Power under the Act as amended from time to time. The obligated entities shall be issued carbon credit certificates for their achievement in reducing the greenhouse gases emission intensity exceeding the target set for such obligated entities, based on the recommendation of National Steering Committee for Indian carbon market and the obligated entities who did not achieve their targeted reduction in greenhouse gases emission intensity shall meet shortfall by purchasing carbon credits certificates from Indian carbon market.

The Scheme also envisages that the National Steering Committee for Indian carbon market and other authorities shall develop the detailed procedure for operationalizing the Indian carbon market, in accordance with this Scheme. The detailed procedure shall contain the following, namely<sup>21</sup>: -

- (i) criteria for issuance of carbon credit certificates;
- (ii) validity of carbon credit certificates;
- (iii) floor and forbearance price of carbon credit certificates;
- (iv) requirement, format and timeline for submissions;
- (v) monitoring, reporting and verification; and
- (vi) any other related and incidental matters.

The Bureau of Energy Efficiency had issued Detailed Procedure for Compliance Mechanism under the Carbon Credit Trading Scheme<sup>22</sup>. Under the said Detailed Procedure, the Bureau has proposed that ICM is established under the purview of the Energy Conservation Act, 2001, and the Environment (Protection) Act, 1986. The Energy Conservation Act, 2001 empowers the Government of India to specify the Carbon Credit Trading Scheme (CCTS), where any entity, including the designated consumers, registered for carbon credit trading scheme will be the “registered entity”. The act empowers the Central Government to issue the “Carbon Credit

<sup>21</sup> Refer Clause 12 of the Carbon Credit Trading Scheme 2023

<sup>22</sup> <https://beeindia.gov.in/en/detailed-procedure-for-compliance-mechanism-under-ccts>

Certificates” to the registered entities under different mechanisms.

### **Conclusion:**

While the Environment (Protection) Act, 1986 empowers the Government of India to specify standards for emission or discharge of pollutant for the obligated sectors. The Ministry of Environment, Forest and Climate Change (MoEFCC) shall notify the GHG Emission intensity targets in terms of tons of carbon dioxide equivalent (tCO<sub>2e</sub>) per unit of equivalent product for each cycle of defined trajectory for the considered obligated entities. The Obligated Entity notified in any trajectory period shall comply for each annual year (compliance cycle) with the GHG emission intensity targets assigned to it.

The Central Government in consultation with the Bureau, having regard to the intensity or quantity of energy consumed and the amount of investment required for switching over to energy efficient equipment and capacity of industry to invest in it and availability of technology and equipment required, specifies some user or class or users of energy as Designated Consumers in S.O. 394(E) dated 12th March 2007 and subsequent amendments.

