Transforming Power Markets

Ref: PXIL/S&R/27122024/1 Date: 27th December 2024

To
**The Secretary**
**Central Electricity Regulatory Commission**
3rd and 4th floor, Chanderlok Building
36 Janpath
New Delhi - 110001

**Sub: Public notice issued by CERC on "Draft Central Electricity Regulatory Commission (Terms and Conditions for Purchase and Sale of Carbon Credit Certificates) Regulations, 2021 – Observations, comments and suggestions from Power Exchange India Limited.**

**Ref:** Public Notice No. RA-14026(13)/1/2024-CERC dated 13th November 2024

**Dear Sir,**

India, at the 26th session of the United Nations Framework Convention on Climate Change (COP 26) in November, 2021, announced its target to achieve net zero by 2070. In recognition of the Para 19 of Article 4 of the Paris Agreement, India's long-term low-carbon development strategy, has been submitted to the United Nations Framework Convention on Climate Change, and it reaffirms the goal of reaching net-zero by 2070.

To develop the carbon market, the Ministry of Power, Government of India notified the Carbon Credit Trading Scheme, 2023 ('**CCTS**') on 28.06.2023. CCTS will play an instrumental role in promoting investments in emission reduction or removal or avoidance and meeting the long-term net zero goals adopted by country. Later, CCTS was further amended to include offset mechanism vide notification dated 19.12.2023. The inclusion of offset mechanism incentivises emission reductions outside of the compliance market and increases market liquidity.

The CCTS sets out a robust framework for the establishment of Indian Carbon Market ('ICM') for reducing, sequestering or avoiding greenhouse gas ("**GHG**") emission across sectors of the Indian economy. In order to achieve this objective, the CCTS envisages pricing GHG emission reduction through trading of carbon credit certificates ("**CCCs**").

The ICM prescribes notification of relevant Regulations for development of market mechanism for transaction in CCCs in power exchanges. Hon'ble Commission vide draft Regulation has provided contours for evolution of robust mechanism that will result in deepening and strengthening of transaction in CCCs by proposing a framework prescribing role of administrator to formulate a mechanism ensuring integrity and transparency of transaction, mandating power exchanges operating under CERC (Power Market) Regulations, 2021 to facilitate 'compliance market' and 'off-set market' for market participants, provisioning concept of floor and forbearance price, prescribing transaction on monthly basis or at other intervals based on demand-supply dynamics, provisioning validity of CCCs, establishing structured process for registration of entities, treatment of non-compliance of these Regulations, etc. These measures will help compliance and off-set entities to optimise their transaction in CCCs.

We request the Hon'ble Commission to kindly take our suggestions on record and grant us an opportunity to present them to the Commission and its staff.

Thanking You,

Yours faithfully,

For **Power Exchange India Limited**

ANIL VITTHAL KALE

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**Anil V. Kale**
**Vice President and Head – Strategy and Regulatory**

# PXIL suggestions and observation on Draft Central Electricity Regulatory Commission (Terms and Conditions for Purchase and Sale of Carbon Credit Certificates) Regulations, 2024

The "draft Central Electricity Regulatory Commission (Terms and Conditions for Purchase and Sale of Carbon Credit Certificates) Regulations, 2024" (**CCC regulation**) is a welcome initiative with significant focus on enlarging and increasing the depth of market in Carbon Credit Certificates ('CCC').

## Policy initiatives

The CCC regulation aims to aid the country in meeting its climate targets and provide a market-based approach for focused investments to mitigate climate change risks. Climate change demands immediate action to reduce greenhouse gas emissions (GHG emissions), a challenge that transcends national boundaries and economic divides. A solution to such a crisis is developing carbon trading.

Carbon trading is a market-based approach offering solutions for reducing greenhouse gas emissions. The genesis of carbon trading can be attributed to the Kyoto Protocol of 1997. The trading of carbon has evolved into a significant component of international climate strategies. The Ministry of Power ('MoP'), Government of India, by exercising powers conferred by clause (w) of Section 14 of the Energy Conservation Act, 2001 notified the Carbon Credit Trading Scheme ('CCTS') on 28.06.2023. CCTS aims to establish mechanisms in the carbon market for reducing the financial burden of emission reduction by facilitating a market where various entities are allowed to trade carbon credits representing verified emission reductions. By facilitating the exchange of CCC through Power exchanges, the scheme supports the country's transition to a low-carbon economy

## Market development

There are broadly two types of carbon markets, e.g., compliance and voluntary.
Compliance markets are created as a result of national policy to meet prescribed targets, whereas, Voluntary carbon markets refer to the issuance, buying and selling of carbon credits, on a voluntary basis.

Carbon Credit refers to a permit to emit a pre-specified quantity of $CO_2$ or other greenhouse gas emissions. As per Clause 2 (1) (c) of CCTS, "carbon credit" means a value assigned to a reduction or removal or avoidance of greenhouse gas emissions achieved and is equivalent to one ton of carbon dioxide equivalent ($tCO_2e$), i.e., when one (1) metric tonne of $CO_2$ is recycled or removed from the atmosphere, it represents a single carbon credit. When an entity engages in activities that remove or decrease such emissions, it earns carbon credits. These credits can then be traded in the market for valuable consideration. The trading of such credits is therefore called carbon credit trading.

**International precedence**

The Emissions Trading Systems ('ETS'), operates on a 'cap-and-trade' principle, also known as 'compliance' market, wherein entities are issued emission/pollution permits or allowances by governments. Polluting entities that exceed their permitted emissions must buy permits from others with permits available for sale (i.e. trade).

The **European Union** launched the world's first international ETS in 2005, covering power generation and energy intensive industries, later in 2012 aviation industry was included and from 2013 more sectors were added, currently, the scheme prescribes norms for emission limits in different greenhouse gases, i.e. Carbon dioxide ('$CO_2$'), Nitrogen Dioxide ('$N_2O$') and Perfluorocarbons ('PFC').

**South Korea** introduced an ETS scheme in 2015 encompassing entities in six sectors, e.g., heat and power, industry, buildings, transportation, waste sector and the public sector. Currently, nearly 685 entities are under purview of ETS. The scheme prescribes norms for emission limits in different greenhouse gases, i.e. $CO_2$, methane ('$CH_4$'), $N_2O$, PFCs, hydrofluorocarbons ('HFCs'), and sulphur hexafluoride ('$SF_6$').

Recently, in 2021, **China** launched ETS, covering nearly 2,225 power sector entities (including combined heat and power, as well as captive power plants of other industrial sectors). The scope of ETS is expected to be gradually expanded to cover seven other sectors in addition to power, e.g. petrochemical, chemical, building materials, steel, nonferrous metals, paper, and domestic aviation.

**GHG emission target – the Indian context**

The Ministry of Environment, Forest and Climate Change ('MoEFCC'), Government of India, shall notify the obligated entities about the GHG emission intensity targets to be achieved by obligated entities. An obligated entity, which successfully reduces the GHG emissions beyond the prescribed target shall be entitled to CCC. Conversely, if an entity fails to meet the target GHG emission it will be required to purchase CCC at power exchanges.

As prescribed in CCTS and draft Regulation, the Power exchanges shall offer different types of Contracts under provision of Regulation 4(1) (d) of PMR 2021 to run 'compliance mechanism' and 'off-set mechanism' markets.

PXIL submits the following clause wise comments / suggestions on the draft regulations.

## 1. Regulation 4 Scope

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*These regulations shall be applicable to the CCCs offered for transactions on Power Exchange (s), including contracts in CCCs as approved by the Commission in accordance with the provisions of the Power Market Regulations*

**Suggestions:**

PXIL submits that the Energy Conservation (Amendment) Act, 2022, empowers the Central Government to specify the Carbon Credit Trading Scheme ('CCTS'). The framework for Indian Carbon Market ('ICM') was developed by notifying the CCTS on 28.07.2023 and amended further in 19.12.2023.

ICM is a national framework to reduce or remove or avoid the greenhouse gases emissions from the Indian economy by pricing the greenhouse gases emission through trading of the CCC.

Clause 10 of CCTS prescribes trading of CCC on power exchanges:

> *'**Clause 10. Trading of carbon credit certificates**.*
>
> *(1) The Commission shall register the power exchanges and approve the carbon credit certificate trading in the Indian carbon market, from time to time;*
>
> *(2) The power exchange shall seek approval of the Commission for their respective bylaws and rules for trading of certificates in the power exchange.*
>
> *(3) The power exchanges shall perform functions regarding trading of carbon credit certificates, in accordance with the regulations notified by the Commission'*

It is submitted that CCTS has prescribed transaction in CCC to be executed exclusively on power exchanges, as power exchange undertake 'price discovery' in transparent and fair process, this has been successfully demonstrated in implementation of electricity and allied market-based instruments to enhance energy efficiency in 'Energy Saving Certificate market' and promote uptake of renewable energy in 'Renewable Energy Certificate market'. Whereas, this unique feature of 'price discovery' is unavailable in bilateral transaction executed by traders and/or in over-the-counter platform, as transactions are opaque in nature because details of transactions are not published in public domain.

**PXIL submits that transaction in CCC should be exclusively mandated on Power exchanges operating under provisions of Central Electricity Regulatory Commission (Power Market) Regulations, 2021.**

## 2. Regulation 9 Dealing in the Certificates

*"Regulation 9 Dealing in the Certificates*

*(2) There shall be two separate market segments in the Power exchange for dealing in CCCs, namely, Compliance market for obligated entities and Offset market for the non-obligated entities*

*(3) The CCCs issued to obligated or non-obligated entities by the Bureau on the approval of the Central Government and credited in the CCC Registry may be placed for dealing in any of the Power exchanges by the CCCs holder, and such CCCs shall be available for dealing in accordance with the Rules, Business Rules and Bye-laws of the Power exchanges"*

**Suggestions:**

**Necessity to operate combined market in CCC**

It is submitted that provision prescribes two separate market for transacting in CCC, e.g. 'compliance market' and 'offset market'. Considering demand generation challenges being faced within Renewable Energy Certificate ('REC') and Energy Saving Certificate ('ESCert') markets resulting from instability in demand and supply, it critical to do an evaluation of the anticipated supply and demand in two types of CCC market before deciding running of separate markets or a single combined market for transacting in CCC, i.e. a single market for transacting in CCC between obligated and non-obligated entities.

Also, since Regulation 11(3) prescribes 'Floor price' and 'Forbearance price', notifying separate/different price band between two types of markets would fragment liquidity in CCC. It is submitted that all over the world, exchanges run auctions by pooling resources and demand to discover credible and robust prices. Liquidity is an important factor for discovery of prices and therefore convergence of 'compliance' and 'offset' CCCs would provide right signals for investors. Operating separate markets with different 'Floor' and 'Forbearance' prices would result in in-efficient pricing of CCC and may hamper future investments in mitigating climate change risk.

A combined session for transacting in CCC would give fillip to supply side, thereby reducing price volatility in CCC, ease cost of compliance on 'obligated entities' and improve overall efficiency of the market.

The Hon'ble Commission is humbly requested to review the provision and amend the same as under for running a combined market in CCC.

> ***"Regulation 9 (2)***
>
> ***There shall be combined market in the Power exchanges for dealing in CCCs for benefit of obligated and non-obligated entities"***

**<u>Re-trading in CCC</u>**

It is submitted that draft Regulation is silent on applicability of 're-trading' in CCC. It is submitted that 're-trading' in CCC should be permitted as it enables added avenue of cash-flow and avoid piling up of inventory at seller's end. PXIL submits that check and balances need to be in place for implementation of above provision to avoid un-due piling of inventory / hoarding of CCC by participating entities.

As and when, CCC is purchased by obligated entity for compliance purpose such CCC would be extinguished. This provision of 're-trading' would enable as under:

a. Allow obligated entities to purchase CCC well in advance to mitigate price volatility generally observed near to close of compliance period
b. In case obligated entities purchase excess CCC after meeting compliance requirement, the same will remain banked for future needs or sell the same during subsequent auctions to meet cash-flow requirement, if any.

The Hon'ble Commission is humbly requested to review the provision and amend the same as under for running a single market in CCC.

> ***"Regulation 9 (2)***
>
> ***The CCC are permitted to be re-traded till the same is purchased by obligated entity for compliance purpose"***

## 3. Other suggestion

**<u>Necessity to form working group of all stakeholders</u>**

It is humbly submitted that a working group comprising of power exchanges and other stakeholders be created to formulate market rules for organised development of market in Carbon Credit Certificate.

**Conclusion**

**The notification for setting-up of Carbon Credit Trading Scheme by Government of India is a path-breaking one. The 'compliance market' and 'offset market' have been envisaged to reflect national circumstances and investment/economic oppurtunities.**

**The regulations also provide the necessary oversight, enforcements mechanisms and flexibility to ensure that carbon market evolves in line with India's environmental goals and commitments under international climate agreements.**

**PXIL submits that draft Regulation aims to create an efficient and credible market in CCC that will accelerate decarbonisation efforts by all stakeholders and place India at the forefront of climate risk mitigation.**

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