

PROFESSIONAL OPPORTUNITIES IN ENVIRONMENTAL LAWS, GREEN AUDIT & CARBON RELATED AREAS - Part II



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Accounting Issues

- In case of self generated CERs
 - What is the stage at which the carbon credits meet the definition of an 'asset'?
 - If the carbon credits meet the definition of an asset, then what is the nature of this asset?
 - If the carbon credits meet the definition of an asset, then when should the carbon credits be recognised?
 - If an asset in respect of carbon credits is recognised, what account should be credited?
 - How should carbon credits, if these are assets, be measured? How should impairment of these assets be dealt with in terms of identification and measurement of impairment
 - How should carbon credits be presented in the financial statements?

Accounting Issues

- When should the carbon credits be derecognised? What should be the treatment of gains and losses on derecognition?
 - When futures contracts of carbon credits are traded on an exchange, an issue would arise as to whether these would be considered as financial instruments within the meaning of AS 30, Financial Instruments: Recognition and Measurement
 - What would be the nature of future contracts, which are not covered by AS 30/AS 31 and how they should be accounted for?
- For purchased CER
- If an entity other than the originator/generator of carbon credits, purchases carbon credits from the exchange for the purposes of sale, it would be a current asset. Should it be shown as inventories? Should Accounting Standard (AS) 2, Valuation of Inventories, be applied to such inventories?

Stages of asset recognition

- when the project is registered entitling it to earn CERs in the future, or
- when the CERs are applied for, or
- when the CERs are actually received, or
- at any other point of time like sale of CER?

Nature of Asset

- Is it a monetary asset?
- Or a financial asset?
- Or an intangible asset?
- Or any other type of asset like inventory?

Measurement of CER

- Should these be measured at the cost of earning the CERs at the time of initial recognition or at fair value?
- Should subsequent measurement be at cost or fair value?
- If these are to be measured at cost, what should be considered as cost?

Guidance Note on Accounting for Self-generated Certified Emission Reductions (CERs)

- Issued by Institute of Chartered Accountants of India (ICAI) on 11th February 2012
- An entity should apply this Guidance Note for accounting periods beginning on or after April 01, 2012.
- Is CER an Asset?
CER is an 'asset' as per the definition given in the 'Framework for the Preparation and Presentation of Financial Statements', issued by the ICAI
- "An asset is a resource controlled by the enterprise as a result of past events from which future economic benefits are expected to flow to the enterprise."

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- When CERs should be recognised in the financial statements?

As per paragraph 88 of the Framework, the criteria for recognition of an asset are as follows:

“88. An asset is recognised in the balance sheet when it is probable that the future economic benefits associated with it will flow to the enterprise and the asset has a cost or value that can be measured reliably.”

- Therefore CERs come into existence when these are credited by UNFCCC in a manner to be unconditionally available to the generating entity.
- CERs should not be recognised before that stage.

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- What type of Asset is a CER?

Keeping in view the non-physical form of CERs, the definition of 'intangible asset', as per Accounting Standard (AS) 26, Intangible Assets, is noted as follows:

"An intangible asset is an identifiable non-monetary asset, without physical substance, held for use in the production or supply of goods or services, for rental to others, or for administrative purposes."

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- Therefore, though CERs are non-monetary assets without a physical form, they do not strictly fall within the meaning of 'intangible asset' as per AS 26.
- CERs are inventories of the generating entity as they are generated and held for the purpose of sale in the ordinary course of business.
- Therefore, even though CERs are intangible assets these should be accounted for as per the requirements of AS 2 – Valuation of Inventories

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- Measurement of CERs?
CERs are inventories for an entity which generates the CERs. Therefore, the valuation principles as prescribed in AS 2 should be followed for CERs. As per AS 2, inventories should be valued at the lower of cost and net realisable value.
- Accordingly, CERs should be measured at cost or net realisable value, whichever is lower.

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- Measurement of Underlying Assets related to CERs?
For the generation of CERs, the generating entity may create certain intangible and tangible assets.
- For example, for reducing emissions, an entity may carry out some research and development which may result into creation of an intangible asset.
- Insofar as expenditure on research and development is concerned, the entity should apply AS 26, Intangible Assets.

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- In some cases, an entity may use a tangible asset to reduce emissions. For example, an entity may use incinerators for the purpose of reducing carbon emissions. In respect of such equipments/devices, the provisions of the Accounting Standard (AS) 10, (Revised) Tangible Fixed Assets (which is being formulated) will apply
- Any pollution control/emission reduction devices installed by the generating entity for the purpose of generating CERs are fixed assets and therefore they shall be accounted for as per AS 10 (Revised).

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- An entity should present CERs as part of Inventories, in the balance sheet, separately from other categories of Inventories such as Raw Materials, Work-in-process, Finished goods and others.
- An entity should disclose the following information relating to CERs in the financial statements:
 - a) No. of CERs held as inventory and the basis of valuation.
 - b) No. of CERs under certification.
 - c) Depreciation and operating and maintenance costs of Emission Reduction equipment expensed during the year.

Climate Exchanges

- Climate exchanges have been established to provide a spot market in allowances, as well as futures and options market to help discover a market price and maintain liquidity.
- The spot market or cash market is a commodities or securities market in which goods are sold for cash and delivered immediately. The spot market for most securities exists primarily on the Internet.
- A futures exchange is a central financial exchange where people can trade standardized futures contracts; that is, a contract to buy specific quantities of a commodity or financial instrument at a specified price with delivery set at a specified time in the future.

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- Currently, futures contracts in carbon credits are actively traded in the European exchanges
- Carbon prices are normally quoted in Euros per tonne of carbon dioxide or its equivalent (CO₂e)
- For trading purposes, one allowance or CER (certified emission reduction) is considered equivalent to one metric tonne of CO₂ emissions.
- These allowances can be sold privately or in the international market at the prevailing market price. Each international transfer is validated by the UNFCCC. Each transfer of ownership within the European Union is additionally validated by the European Commission.

Exchanges trading in carbon allowances

- Chicago Climate Exchange
- European Climate Exchange
- Nord Pool
- Powernext
- Multi Commodity Exchange
- National Commodity and Derivatives Exchange
- Indian Energy Exchange

Multi Commodity Exchange of India Ltd. (MCX)

- MCX is a demutualised nationwide electronic multi commodity futures exchange set up by Financial Technologies with permanent recognition from Government of India for facilitating online trading, clearing & settlement operations for futures market across the country.
- Headquartered at Mumbai
- The exchange started operations in November 2003.

Indian Energy Exchange Limited (IEX)

- IEX is India's first nationwide, automated, and online electricity trading platform.
- It has been conceived to catalyse the modernisation of electricity trade in the country by ushering in a transparent and neutral market through a technology-enabled electronic trading platform.
- IEX is a demutualised exchange (for profit shareholder owned corporation)
- IEX commenced operations on 27th June 2008
- Regulator of IEX: Central Electricity Regulatory Commission (CERC)

Energy and Environment Inter-phase

- Energy and environment are essential for sustainable development. The poor are disproportionately affected by environmental degradation and lack of access to clean, affordable energy services.
- Section 2(h) of the Energy Conservation Act 2001, defines 'Energy' as –
“Energy means any form of energy derived from fossil fuels, nuclear substances or materials, Hydro-electricity and includes electrical energy or electricity generated from renewable sources of energy or biomass connected to the grid.”

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- About 20% of world's energy is generated from coal and about 60% of world's energy is generated from oil and natural gas.
- Because of extensive use of fossil fuel, such as coal, oil and natural gas, as primary source of energy today, the harmful emissions of GHG (Green House Gases) such as Carbon Dioxide increases the GHG level and causes the Greenhouse Effect and eventually global warming.
- Scientists believe that global warming will cause the average World temperature rise by one Degree Celsius by the year 2020 and four Degree Celsius by the end of 21st century.

Energy Conservation

- Energy conservation is the practice of decreasing the quantity of energy used. It can be achieved through efficient energy use, where energy use is decreased while achieving a similar outcome, or by reduced consumption of energy services.
- Energy conservation facilitates the replacement of non-renewable resources with renewable energy. It is often the most economical solution to energy shortages, and is a more environmentally benign alternative to increased energy production.
- Investment in energy efficiency/energy conservation is highly cost effective. It also avoids investment in fuel, mining, transportation etc.

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- Energy requirement in India is increasing rapidly. Its demand for commercial energy in 2020 is expected to increase by 250% from today's level.
- Economic growth is desirable for developing countries, and energy is essential for economic growth.
- If India is to achieve the targeted growth in GDP, it would need commensurate input of energy, mainly commercial energy in the form of coal, oil, gas and electricity.

Energy Conservation in India - Energy Conservation Act, 2001

- Enacted by the Government of India considering the vast potential of energy savings and benefits of energy efficiency.
- It was enacted in October 2001 but became effective from 1st March, 2002.
- The Act provides for the legal framework, institutional arrangement and a regulatory mechanism at the Central and State level to embark upon energy efficiency drive in the country.
- The Act is divided into 10 chapters, comprising of 62 sections and one Schedule.

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- Framework of the Act:

Chapter I: Preliminary

Chapter II: Bureau of Energy Efficiency

Chapter III: Transfer of assets, liabilities etc. of
Energy Management Centre to Bureau

Chapter IV: Powers and functions of Bureau

Chapter V: Power of Central Government to
facilitate and enforce efficient use of energy and
its conservation

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Chapter VI: Power of State Government to facilitate and enforce

efficient use of energy and its conservation

Chapter VII: Finance, Accounts and Audit of Bureau

Chapter VIII: Penalties and Adjudication

Chapter IX: Appellate Tribunal for Energy Conservation

Chapter X : Miscellaneous

The Schedule : List of Energy Intensive Industries and other establishments specified as designated consumers.

Measures proposed by the Act

1. Energy Conservation
2. Energy audit of government buildings
3. Capacity building amongst departments to take up energy efficiency programmes

The Thrust Areas :

- a. Industry specific Task Forces.
- b. Notifying more industries as designated consumers.
- c. Conduct of energy audit amongst notified designated consumers.
- d. Recording and publication of best practises
- e. Development of energy consumption norms.
- f. Monitoring of compliance with mandated provision by designated consumers.

Important Provisions Under the Act

- **Energy intensive Industries**

The Schedule to the Energy Conservation Act, 2001 gives the List of Energy Intensive Industries and other establishments specified as designated consumers.

- **Establishment of Bureau of Energy Efficiency**

The Bureau of Energy Efficiency (BEE) is a statutory Body under the Ministry of Power, Government of India established with effect from 1st March, 2002.

- **The Energy Conservation Building Codes (ECBC)**

The BEE launched the Energy Conservation Building Code (ECBC) on 27th May 2007 in New Delhi. This code addresses the design of new, large commercial buildings to optimize the building's energy demand.

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■ **Designated Consumers (DCs)**

The Central Government may, by notification, in consultation with the Bureau, specify, any user or class of users of energy as a designated consumer for the purposes of this Act. The Schedule to the Act provides a list of the Designated Consumers. These DCs have to :

1. Appoint/Designate Energy Managers
2. Get Energy Audit conducted by Accredited Energy Auditors
3. Implement Techno-Economic Viable Recommendations
4. Comply with norms of specific energy consumption fixed
5. Submit Report on Steps Taken

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- **Labeling Programme for Appliances**

An energy labeling programme for appliances was launched in 2006, and comparative starbased labeling has been introduced for fluorescent tubelights, air conditioners, and distribution transformers.

- **Energy Audits of Large Industrial Consumers**

In March 2007, the conduct of energy audits was made mandatory in large energy-consuming units in nine industrial sectors. It is mandatory for the designated consumers to get energy audit conducted by an “accredited energy auditor”. These units are also required to employ “certified energy managers”, and report energy consumption and energy conservation data annually.

Environmental Laws

- Complex and interlocking body of statutes, common law, treaties, conventions, regulations and policies to regulate the impacts of human activity on the natural environment
- The Indian constitution is amongst the few in the world that contains specific provisions on environment protection.
- The Constitution states that it is the duty of the state to 'protect and improve the environment and to safeguard the forests and wildlife of the country'.
- Organisations have a legal and moral duty to comply with environmental laws and regulations.

Sources of Environmental Law

- Treaties
 - Bilateral
 - Multilateral
- Protocols
- Conventions
- Customary International Law
- Judicial decisions etc.

United Nations Conference on the Human Environment (UNCHE)

- An international conference convened under United Nations auspices held in Stockholm, Sweden from June 5-16, 1972.
- It was the UN's first major conference on international environmental issues, and marked a turning point in the development of international environmental politics.
- The conference acknowledged that the goal of reducing human impact on the environment would require extensive international cooperation, as many of the problems affecting the environment are global in nature.

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- The meeting agreed upon a Declaration containing 26 principles concerning the environment and development; an Action Plan with 109 recommendations, and a Resolution.
- Following this conference, the United Nations Environmental Programme (UNEP) was launched in order to encourage United Nations agencies to integrate environmental measures into their programs.

Important Environmental Laws in India

- The Environment (Protection) Act, 1986
- Water (Prevention and Control) Act, 1974
- Air (Prevention and Control) Act, 1981
- The Public Liability Insurance Act, 1991
- The Biological Diversity Act, 2002
- The Indian Forest Act, 1927
- Forest (Conservation) Act, 1980
- The Indian Wildlife Protection Act, 1972
- The National Green Tribunal Act, 2010

Environment Impact Assessment (EIA)

- The study to predict the effect of a proposed activity/project on the environment.
- Its a decision making tool - EIA compares various alternatives for a project and seeks to identify the one which represents the best combination of economic and environmental costs and benefits.
- EIA systematically examines both beneficial and adverse consequences of the project and ensures that these effects are taken into account during project design.

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- It helps to identify possible environmental effects of the proposed project, proposes measures to mitigate adverse effects and predicts whether there will be significant adverse environmental effects, even after the mitigation is implemented.
- Benefits of EIA - protection of environment, optimum utilisation of resources and saving of time and cost of the project.

Stages of EIA Process

- Screening
- Setting Scope
- Impact Analysis
- Mitigation
- Reporting
- Review of EIA
- Decision Making
- Post-Monitoring

Green Audit

- Green audit is an official examination of the effects a company has on the environment.
- It can also be described as the inspection of a company to assess the total environmental impact of its activities or of a particular product or process.
- It is also widely known as Environmental Audit.
- Its Aim is to review the measures taken by the company to combat pollution.

Compliance of Laws under Green Audit

- National Environment Laws, Rules and Regulations;
- Notifications issued by the Government and the agencies under them;
- Standards issued by responsible bodies such as those for Environment Impact Assessments (EIA), ISO 14001 for Environment Management System, pollution control orders and standards issued by oversight and implementation bodies such as CPCB etc.;
- Sanctions and permits issued in respect of the entity by the regulatory bodies concerned;
- EIA reports, reviews by independent organisations, company's environment policy etc.

Green Audit Report

- The Green Audit Report should be complete, precise, accurate and balanced.
- Contents should be easy to understand and free from vagueness or ambiguity
- It should include information which is supported by complete and relevant audit evidence and be independent, objective fair and constructive.
- It should contain constructive and precise recommendations.
- It must be persuasive and instrumental in inspiring the managements of entities to take corrective actions.
- The violations and omissions should also be effectively mentioned in the report.

Ministry of Environment & Forests (MOEF)

- Nodal agency in the administrative structure of the Central Government for the planning, promotion, co-ordination and overseeing the implementation of India's environmental and forestry policies and programmes
- Also serves as the nodal agency for the United Nations Environment Programme (UNEP), South Asia Co-operative Environment Programme (SACEP), International Centre for Integrated Mountain Development (ICIMOD) and for the follow-up of the United Nations Conference on Environment and Development (UNCED).

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- The Ministry is also entrusted with issues relating to multilateral bodies such as the Commission on Sustainable Development (CSD), Global Environment Facility (GEF) and of regional bodies like Economic and Social Council for Asia and Pacific (ESCAP) and South Asian Association for Regional Co-operation (SAARC) on matters pertaining to the environment.

Central Pollution Control Board (CPCB)

- Constituted in September, 1974
- Is a body corporate having perpetual succession and a common seal with power to acquire, hold and dispose of property and to contract and may by the aforesaid name sue or be sued.
- Principal Functions of the CPCB
 - (i) to promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution, and
 - (ii) to improve the quality of air and to prevent, control or abate air pollution in the country.

State Pollution Control Board (SPCB)

- Constituted by the State Government by notification in the official gazette.
- With regard to a Union Territory, a SPCB is not constituted. The CPCB exercises the powers and performs the functions of a SPCB for that Union Territory, however it may delegate its powers.
- SPCB will be a body corporate having perpetual succession and a common seal with power to acquire, hold and dispose of property and to contract and may by the aforesaid name sue or be sued

National Green Tribunal

- Established on 18.10.2010 under the National Green Tribunal Act 2010
- Objective - Effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.
- It is a specialized body equipped with the necessary expertise to handle environmental disputes involving multi-disciplinary issues.

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- The Tribunal will not be bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.
- The Tribunal is mandated to make and endeavour for disposal of applications or appeals finally within 6 months of filing of the same.
- Initially, the NGT is proposed to be set up at five places of sittings and will follow circuit procedure for making itself more accessible.
- New Delhi is the Principal Place of Sitting of the Tribunal and Bhopal, Pune, Kolkata and Chennai shall be the other 4 place of sitting of the Tribunal.

Important Web Sites

- <http://www.ipcc.ch/>
- <http://cdm.unfccc.int/index.html>
- <http://www.worldbank.org>
- <http://envfor.nic.in/cc/index.htm>
- <http://www.cdmindia.nic.in/>
- <http://www.mcxindia.com>
- <http://www.iexindia.com>
- <http://www.teriin.org/>
- <http://www.cpcb.nic.in>
- <http://www.greentribunal.in/> -

Questions/ Suggestions/ Comments???



About the Author

- *CA. Rajkumar S Adukia is an eminent business consultant, academician, writer, and speaker. He is the senior partner of Adukia & Associates.*
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- *He has been coordinating with various Professional Institutions, Associations, Universities, University Grants Commission and other Educational Institutions.*
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