

Exposure Draft

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

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Accounting Standards Board
The Institute of Chartered Accountants of India

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The following is the Exposure Draft of the Guidance Note on Accounting for Self-generated Certified Emission Reductions (CERs), issued by the Accounting Standards Board of the Institute of Chartered Accountants of India, for comments. The Board invites comments on any aspect of this Exposure Draft. Comments are most helpful if they indicate the specific paragraph or group of paragraphs to which they relate, contain a clear rationale and, where applicable, provide a suggestion for alternative wording.

Comments should be submitted in writing to the Secretary, Accounting Standards Board, The Institute of Chartered Accountants of India, ICAI Bhawan, Post Box No. 7100, Indraprastha Marg, New Delhi – 110 002, so as to be received not later than June 15, 2009. Comments can also be sent by e-mail at edcommentsasb@icai.org or asb@icai.org.

INTRODUCTION

1. One challenge facing the human race is that of global warming. To address the issue of global warming, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992, with the objective of limiting the concentration of Green House Gases (GHGs¹) in the atmosphere. Subsequently, to supplement the Convention, the Kyoto Protocol came into force in February 2005, which sets limits to the maximum amount of emission of GHGs by countries. The Kyoto Protocol at present commits 41 developed countries (known as Annex I countries²) to reduce their GHG emissions by at least 5% below their 1990 baseline emission by the commitment period of 2008-2012. As per the Kyoto Protocol, at present, developing and least-developed

¹ GHGs refer to polluting gases including carbon dioxide which cause global warming.

² Developed countries given in Annex I to UNFCCC which are committed to reduce their GHG emissions are known as 'Annex I countries'.

countries are not bound by the amount of GHG emissions that they can release in the atmosphere, though they too generate GHG emissions.

2. Under the Kyoto Protocol, countries with binding emission reduction targets (which at present are applicable to developed countries) in order to meet the assigned reduction targets are issued allowances (carbon credits) equal to the amount of emissions allowed. An allowance (carbon credit) represents an allowance to emit one metric tonne of carbon dioxide equivalent. To meet the emission reduction targets, binding countries in turn set limits on the GHG emissions by their local businesses and entities. Further, in order to enable the developed countries to meet their emission reduction targets, Kyoto Protocol provides three market-based mechanisms – Joint Implementation (JI), Clean Development Mechanism (CDM), and International Emission Trading (IET).

3. Under JI, a developed country with a relatively high cost of domestic GHG reduction can set up a project in another developed country that has a relatively low cost and earn carbon credits that may be applied to their emission targets. Under CDM, a developed country can take up a GHG reduction project activity in a developing country where the cost of GHG reduction is usually much lower and the developed country would be given carbon credits for meeting its emission reduction targets. Examples of projects include reforestation schemes and investment in clean technologies. In case of CDM, entities in developing/least developed countries can set up a GHG reduction project, get it approved by UNFCCC and earn carbon credits. Such carbon credits generated can be bought by entities of developed countries with emission reduction targets. The unit associated with CDM is Certified Emission Reduction (CER) where one CER is equal to one metric tonne of carbon dioxide equivalent. Under IET, developed countries with emission reduction targets can simply trade in the international carbon credit market. This implies that entities of developed countries exceeding their emission limits can buy carbon credits from those whose actual emissions are below their set limits. Carbon credits can be exchanged between businesses/entities or bought and sold in international market at the prevailing market price.

4. These mechanisms serve the objective of both the developed countries with emission reduction targets, who are the buyers of carbon credits as well as of the developing and least developed countries with no emission targets (at present), who are the sellers/suppliers of carbon credits. The non-polluting companies from less developed countries can sell the quantity of carbon dioxide emissions they have reduced (carbon credits) and earn extra money in the process. This mechanism of buying and selling carbon credits is known as carbon trading.

OBJECTIVE & SCOPE

5. With large number of entities in India generating carbon credits and the carbon credits being a relatively new area, a need was felt to provide accounting guidance in this area. It is noted that the accounting issues and the consequent accounting treatment involved in the three different mechanisms mentioned in paragraph 3 above may be different. However, since at present the Clean Development Mechanism is the relevant mechanism in India and with India currently not being under the obligation to reduce its GHG emissions as per the Kyoto Protocol, this Draft Guidance Note provides guidance on accounting for carbon credits, i.e., CERs generated under the Clean Development Mechanism. This Draft Guidance Note provides guidance on matters of applying accounting principles relating to recognition, measurement and disclosures of CERs generated by the entity that has obtained the same under the Clean Development Mechanism (hereinafter referred to as ‘self-generated CERs’).

6. From the above, it follows that this Draft Guidance Note does not address the accounting issues involved in carbon credits under Joint Implementation and International Emission Trading — the other two mechanisms under the Kyoto Protocol.

CLEAN DEVELOPMENT MECHANISM AND CERs

7. The Clean Development Mechanism is a flexible mechanism to enable countries with GHG emission reduction commitments, i.e., Annex I countries to meet their commitments by paying for GHG emission reductions in developing countries (non-Annex I countries). Such CDM projects earn saleable Certified Emission Reduction (CER) units, each equal to one metric tonne of carbon dioxide equivalent, which can be counted towards meeting Kyoto targets (given in Annexure B of Kyoto Protocol). This mechanism encourages the non-Annex I countries, i.e., developing and least developed countries which at present are not bound by Kyoto Protocol to reduce GHG emissions. India, being a non-Annex I country, has emerged to be a beneficiary as Indian entities can set up CDM projects which reduce GHG emissions and thereby generate CERs which can be sold to Annex I countries and used by the latter to meet their binding emission reductions.

8. To be eligible for CDM benefits, the proposed project must have the feature of additionality, i.e., the CDM project must provide reductions in emissions that are additional to that would occur in the absence of the project. For example, an entity can generate CERs under CDM, if it installs a waste heat boiler that saves energy. This is because reduced fuel use reduces the amount of carbon dioxide emitted. However, if an entity has to undertake the project activity because of law, for example, if the industry is legally mandated to have a waste-heat recovery boiler, such a project is generally not eligible for CDM benefits.

9. An entity desirous of undertaking a CDM project activity, generate carbon credits therefrom, and earn revenue needs to go through several stages. These are described below:

(i) *Registration/Accreditation of the project*

As a first step, an entity desirous of setting up a CDM project needs to get the project registered with the CDM Executive Board of the UNFCCC. To do so, it needs to develop a Project Design Document (PDD) which contains the description of the proposed CDM project. The entity also

needs an approval from the Designated National Authority (DNA) which is an office, ministry or other official entity appointed by a Party to the Kyoto Protocol to review and give national approval to projects proposed under the CDM. India's DNA is the National CDM Authority (NCDMA). Once approved by the DNA, the proposed project is required to be validated by a Designated Operational Entity (DOE). A DOE is a company/organisation accredited by the CDM Executive Board that checks whether projects meet the CDM criteria. The DOE checks the PDD and hosts the same on UNFCCC's website for public comments for a period of 30 days. Upon the expiry of this period, the DOE makes a determination as to whether on the basis of the information provided and taking into consideration the comments received, the project should be validated. Once satisfied, the DOE submits the validation report and all the other necessary documents to the CDM Executive Board along with the request for project registration, and all these documents are hosted on UNFCCC's website. If within 8 weeks no request for review of the proposed CDM project is received by UNFCCC, the project is automatically registered.

(ii) *Monitoring, Verification and Issuance of CERs*

Once the project is registered and becomes operational, the performance of the CDM project is monitored and verified periodically (usually once a year) to determine whether emission reductions have taken place before the CDM Executive Board can issue CERs. For this, the entity having got itself successfully registered appoints a DOE which is different from the one involved in the first stage. The DOE assesses the quality/quantity of GHG emission reductions and compliance with all CDM criteria. After successful verification, the DOE submits the verification report and other relevant documents to the Executive Board and requests for issuance of CERs. UNFCCC hosts all these documents on its website and if within 15 days from the date of making the request for issuance no request for

review is received, CERs are certified and issued to the entity. Certification is a written assurance by UNFCCC that a project activity achieved the emission reductions as verified.

(iii) Sale/Trade

The CERs obtained by the entity may be sold to those who need it.

10. From the above, it follows that there are various parties involved in the carbon trading process. These include (i) Generating entity/generator, i.e., the entity which undertakes CDM project activity to generate CERs; (ii) CDM Executive Board of UNFCCC which approves the CDM projects and issues CERs; (iii) Designated National Authority as defined above and in India it refers to National CDM Authority; (iv) Designated Operational Entities as defined above which validate and verify the CDM project and its operations; and (v) the buying entity/buyer which buys the CERs generated by the generator and for the purpose of this draft Guidance Note it refers to the entity of a developed country which is bound by the Kyoto Protocol emission reduction targets.

ACCOUNTING TREATMENT

Whether CER is an ‘asset’

11. An issue that arises while accounting for carbon credits is that whether the carbon credits generated under the Clean Development Mechanism, i.e., CERs, can be considered as assets of the generating entity.

12. The ‘Framework for the Preparation and Presentation of Financial Statements’, issued by the Institute of Chartered Accountants of India, defines an ‘asset’ as follows:

“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.”

CER is an ‘asset’ as per the definition given in the Framework

13. From the above-mentioned definition of ‘asset’ it follows that for a CER to be considered as an asset of the generating entity, it should be a resource controlled by the generating entity arising as a result of past event/s, and from which future economic benefits are expected to flow to the generating entity.

14. In order to generate CERs, an entity undertakes a CDM project activity and thereby reduces carbon emissions. It is mentioned in paragraph 9 above that various stages are involved in a CDM project activity to generate CERs. After a successful registration, as the CDM project is operated, carbon emission reductions are generated and these continue to be generated over the course of the project. However, at this stage, i.e., when the emission reductions are taking place, CERs do not arise. It may be argued that as soon as emission reductions take place these should be considered as assets since certification thereof subsequently in the form of CERs is a procedural aspect. In this regard, it is noted that issuance of CERs is subject to the verification process i.e., CERs are applied for and on the expiry of 15 days having received no request for review and after having satisfied all requirements, a communication is received from UNFCCC thereby crediting CERs to the generating entity. It is, thus, possible that emission reductions may not eventually result in to creation of CERs. Accordingly, at this stage when emission reductions are taking place, CERs can, at best, be said to be contingent assets as per Accounting Standard (AS) 29, *Provisions, Contingent Liabilities and Contingent Assets*, which defines a contingent asset as “***a possible asset that arises from past events the existence of which will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the enterprise***”. This is because when the generating entity reduces carbon emissions by way of a CDM project, the generating entity becomes eligible to receive CERs from UNFCCC. However, whether CERs will actually arise and be received by the generating

entity or not will depend on a future uncertain event, i.e., certification of the same by UNFCCC.

15. It follows from the above that a CER comes into existence and meets the definition of an asset only when the communication of credit of CERs is received by the generating entity. This is because only at this stage the CER becomes a resource controlled by the generating entity and therefore leads to expected future economic benefits in the form of cash and cash equivalents which would arise on the future sale of CERs. As stated above, at other earlier stages of the CDM project activity, there is no resource in existence for the generating entity, and hence the question of ‘resource controlled’ and ‘expected future economic benefits’ therefore do not arise. Accordingly, CER is an ‘asset’, when it comes into existence as stated aforesaid.

Recognition of CERs

16. According to the ‘Framework for the Preparation and Presentation of Financial Statements’, once an item meets the definition of the term ‘asset’, it has to meet the criteria for recognition of an asset as laid down in the Framework so that it may be recognised in the financial statements. In other words, it has to be seen when the 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.”

17. From paragraph 15 it follows that CERs come into existence when these are credited by UNFCCC in a manner to be unconditionally available to the generating entity. Therefore, CERs should not be recognised before that stage. Further, from the above it follows that for CERs to be recognised in the financial statements of the generating entity as assets, the two criteria with regard to probable future economic benefits flowing from

the CERs and CERs possessing a cost or value that can be measured with reliability should be met as follows:

- (a) As regards the probability criterion for recognition of CERs, it may be mentioned that the concept of probability refers to the degree of uncertainty that future economic benefits associated with CERs will flow to the entity. Therefore, the probability criterion is said to be met when there is a reasonable assurance that future economic benefits will flow from the CERs to the entity. As the market for CERs is relatively new, the future economic benefits may not always be assured. Thus, an entity needs to make an assessment for the probability of future economic benefits. Accordingly, if there is a probable market for the self-generated CERs ensuring flow of economic benefits in the future, CERs should be recognised.
- (b) As regards the criterion for measurement of cost or value, there are certain costs which are incurred to generate CERs, and therefore the cost of CERs can be measured reliably. The value at which CERs are to be measured is discussed in later paragraphs.

What type of asset is a CER

18. Having agreed that a CER is an asset as per the 'Framework for the Preparation and Presentation of Financial Statements' and also having determined when a CER meets the recognition criteria, its nature is to be examined. 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.”

19. From the above, it is noted that 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. The reason is that CERs are not held for use in the production or supply of goods or services, and neither are CERs used for administrative purposes nor are they used for the purpose of renting to others. Instead, CERs generated by the generating entity are held for the purpose of sale. However, it may be mentioned that though the definition of ‘intangible asset’ does not mention assets held for sale, the other requirements of AS 26, such as the following, indicate that intangible assets include assets which are developed by an entity for sale:

“ 44. An intangible asset arising from development (or from the development phase of an internal project) should be recognised if, and only if, an enterprise can demonstrate all of the following:

- (a) the technical feasibility of completing the intangible asset so that it will be available for use or sale;***
- (b) its intention to complete the intangible asset and use or sell it;***
- (c) its ability to use or sell the intangible assets;***
- (d) ...***
- (e) the availability of adequate technical, financial and other resources to complete the development and use or sell the intangible asset; and***
- (f) ...”*** [Emphasis supplied]

20. Further, though CERs are intangible assets as mentioned above, AS 26³ scopes out those intangible assets from its purview which are specifically dealt with in another Accounting Standard and requires them to be accounted for in accordance with that Standard. For instance, intangible assets held for the purpose of sale in the ordinary course of business are excluded from the scope of AS 26 (paragraph 2) and, therefore, are to be accounted for as per Accounting Standard (AS) 2, *Valuation of Inventories*. In this context, the definition of the term ‘inventories’ as given in AS 2 is noted below:

“Inventories are assets:

³ Reference may be made to paragraph 2 of AS 26.

- (a) *held for sale in the ordinary course of business;*
- (b) *in the process of production for such sale;*
- (c) *in the form of materials or supplies to be consumed in the production process or in the rendering of services.”*

21. From the above, it follows that 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.

Measurement

Measurement of CERs

22. As stated above, 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.

Cost of Inventories

23 AS 2 prescribes the composition of cost of inventories as follows:

“6. The cost of inventories should comprise all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.”

24. Various costs are incurred by the generating entity to set up a CDM project activity, operate the CDM project and generate CERs. These may include the following:

- (i) research costs arising from exploring alternative ways to reduce emissions;
- (ii) costs incurred in developing the selected alternative as a process/device to reduce emissions;
- (iii) costs incurred to prepare the Project Design Documents;
- (iv) fees paid to DOEs for validation and verification and to the National Authority for approval;
- (v) fees of registering with UNFCCC;
- (vi) costs incurred for monitoring the reductions of emissions;
- (vii) costs incurred for certification of CERs; and
- (viii) operating costs incurred to run the CDM project.

25. As already mentioned earlier, CERs do not come into existence and, therefore, do not become the assets of the generating entity till the UNFCCC certifies and credits the same to the generating entity. Accordingly, not all costs incurred by the generating entity give rise to CERs and therefore not all costs can be considered as the costs of bringing the CERs to existence (i.e., their present location and condition). For example, the research and development costs as mentioned above are the pre-implementation costs of the CDM projects which do not result in CERs. Accordingly, these should be treated as per Accounting Standard (AS) 26, *Intangible Assets* (refer also to paragraph 30 below) when they bring into existence a separate intangible asset such as a patent of a process to reduce carbon emissions. Similarly, the other costs such as those incurred for preparation of PDD and registration of the CDM project with UNFCCC, etc., do not result in CERs coming into existence, and therefore these costs cannot be inventorised. It is only the costs incurred for the certification of CERs by UNFCCC which bring the CERs into existence by way of credit of the same by UNFCCC to the generating entity. Thus, the costs incurred by the generating entity for certification of CERs, are the costs of inventories of CERs.

26. In order to certify and issue CERs, UNFCCC imposes two types of levies on the generating entity. The first type of levy is in kind whereby a specified percentage of the CERs earned are deducted at the point of issuance by the UNFCCC. In other words, the generating entity is issued CERs net of this levy. For example, if this levy is 2% and if 1000 CERs are to be issued, then after deducting 20 CERs, 980 CERs will be credited. This levy is applied to all projects other than those of the Least Developed Countries. The second type of levy imposed is in the form of a cash payment which is charged by the UNFCCC towards meeting administrative costs of UNFCCC. In this levy, a fixed payment per unit of CER is charged for the total CERs credited to the generating entity. Taking the above example further, if USD 0.10 per CER is charged towards the second levy, then the generating entity will need to make a payment at this rate for the 980 CERs credited to it, i.e. USD 98. Apart from these two levies, the generating entity normally pays a fee to the consultant for the services rendered to obtain the certification of CERs by UNFCCC.

27. From the above, it follows that the 'costs incurred for certification of CERs' at which the inventory of CERs should be valued include the consultant's fee and the cash payment made under the second levy to the UNFCCC for obtaining the credit of CERs. The deduction of CERs by UNFCCC under the first levy is in kind which increases the per unit cost of the CERs credited to the generating entity.

Net Realisable Value

28. AS 2 defines net realisable value as follows:

"Net realisable value" is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

29. In the determination of the net realisable value of CERs, paragraph 22 of AS 2 reproduced below should be used as guidance:

“22. Estimates of net realisable value are based on the most reliable evidence available at the time the estimates are made as to the amount the inventories are expected to realise. These estimates take into consideration fluctuations of price or cost directly relating to events occurring after the balance sheet date to the extent that such events confirm the conditions existing at the balance sheet date.”

Measurement of underlying assets related to CERs

30. 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*.

31. 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) *Property, Plant and Equipment*⁴ will apply, as is evident from the following paragraph thereof:

“11. Items of property, plant and equipment may be acquired for safety or environmental reasons. The acquisition of such property, plant and equipment, although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for an entity to obtain the future economic benefits from its other assets. Such items of property,

⁴ AS 10, Accounting for Fixed Assets, is being revised and will be issued as Accounting Standard (AS) 10, (Revised) *Property, Plant and Equipment*. The same will be issued shortly,

plant and equipment qualify for recognition as assets because they enable an entity to derive future economic benefits from related assets in excess of what could be derived had those items not been acquired. For example, a chemical manufacturer may install new chemical handling processes to comply with environmental requirements for the production and storage of dangerous chemicals; related plant enhancements are recognised as an asset because without them the entity is unable to manufacture and sell chemicals. However, the resulting carrying amount of such an asset and related assets is reviewed for impairment in accordance with AS 28, *Impairment of Assets*.”

32. From the above, it is clear that any pollution control/emission reduction devices installed by the generating entity for the purpose of generating CERs are property, plant and equipment and therefore they shall be accounted for as per AS 10 (Revised). Further, as these devices are specifically installed to generate CERs, the depreciation of such devices should not be included in the cost of the inventory of the principal product/s of the generating entity as they do not contribute to bringing the inventory of the principal product/s to their present location and condition. For example, if an entity in a chemical business installs incinerators to reduce emissions, the depreciation of the incinerators will not be added in the cost of producing chemicals. Further, the depreciation of these devices will also not be included in the cost of inventory of CERs as the depreciation is incurred at the stage before CERs come into existence. As stated in paragraph 25, only the costs incurred towards the certification are the costs of the inventory of CERs as they bring the CERs into existence. Accordingly, depreciation of the pollution control/emission reduction devices should be expensed in the statement of the profit and loss in the period to which it relates.