

ACCOUNTING TREATMENT OF GREEN CERTIFICATES

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Abstract: *The main point of this paper is about how to measure and report the green certificates, the applicable accounting treatment according with the length of detention in heritage of those certificates, long or short term. Also, the paper includes clarifications in description of green certificates market. There is presented the normative act which regulates the accounting records and used accounts for purchase, reception with free title and cession of green certificates.*

Key words: *green certificates, accounting treatment, accounting records*

INTRODUCTION

A Green Certificate - terminology used in Europe - also known as Renewable Energy Certificates (RECs) in the USA, are a tradable commodity proving that certain electricity is generated using renewable energy sources. Typically one certificate represents generation of 1 Megawatt-hour of electricity.

Green certificates represent the environmental value of renewable energy generated. The certificates can be traded separately from the energy produced. Several countries use green certificates as a mean to make the support of green electricity generation closer to a market economy instead of more bureaucratic investment support and feed-in tariffs.

Once in the grid, renewable energy is impossible to separate from the conventionally generated energy. This makes purchasing of a green certificate equal to purchasing a claim, that the certificate owner consumed energy from the renewable portion of the whole energy in the grid. Therefore certificate purchase does not affect how much renewable energy was actually generated - only how it was distributed.

Therefore, Green Certificate (GC) represents a form of support for electricity produced from renewable energy sources, a document which attests that a quantity of electricity was produced using renewable energy sources.

MATERIALS AND METHODS

Green certificates are normally issued at the moment that the certifiable green electricity is registered at the kWh-meter. Each certificate must be unique and separately identifiable by a unique number, representing codes to identify the type of renewable energy source, the date of production and the owner of the green certificate in order to serve the basic purposes in a certificate system.

Registries and accounts constitute key elements and provide information on overall supply, demand and stocks of banked certificates.

The certificates are withdrawn from circulation at the moment that a customer accounts for his obligation by presenting the certificates to the registration authority. Certificates are also withdrawn if their period of validity expires, when the electricity is consumed.

Between issuing and trading of green certificates could be done by the owner of the certificates, but also a „bank”, an energy utility or an association of producers. Sale of certificates is separated from the sale of electricity.

The certificate serves as a security that can be sold to interested parties, and represents a source of an extra income to the producer of the certified electricity.

The accounting for emission permits or renewable energy certificates. Entities must therefore apply judgment and determine an accounting method based on the general principles of IFRS.

Green certificates, on the other hand, are granted to an electricity generator based on the power output (kWh) derived from renewable energy sources. The generator may then sell these to distributors or retailers, either with the electricity sold, or separately. Distributors or retailers must source a specified portion of energy they sell from renewable sources. Hence, they are required to hand over to the government a relevant number of green certificates (as evidence of renewable sources being used) or pay a penalty.

Green Certificates Market – Description

OPCOM - Green Certificates Market Operator – legal person which assures Green Certificates trading and determines the prices on the Centralized Green Certificates Market, performing the functions established by the Regulation for organizing and functioning of the Green Certificates Market (Order no. 15 / 2005 issued by ANRE).

Quota Obligation System – Mechanism used to promote the production of electricity from renewable energy sources by means of the acquisition by the suppliers of a specified quota of electricity produces from renewable energy sources in order to sell it to their consumers.

The functioning of the quota obligation system to promote the electricity produces from renewable energy sources supposes the following phases:

- The Regulator Authority establishes a fixed quota of electricity produces from renewable energy sources which the suppliers are obliged to buy it.
- The Regulator Authority yearly qualifies the produces of electricity from renewable energy sources in order to receive Green Certificates.
- The Producers receive for each unit of electricity delivered into the network, 1 MWh, a Green Certificate, which can be sold separately from the electricity which produced them, on the Green Certificates Market.
- In order to fulfill their obligation, the suppliers have to own a number of Green Certificates corresponding with the quota of electricity produced from renewable energy sources imposed.
- The Green Certificates value represents an additional income received by the producers for the “clean” energy that they deliver into the network.
- The price of electricity sold is determined on the electricity market.
- The additional price received for the Green Certificates sold is determined on a parallel market, separated from the electricity market, where are traded the environmental benefits of the “clean” electricity production.

The Green Certificates Value is determined by means of the market mechanisms:

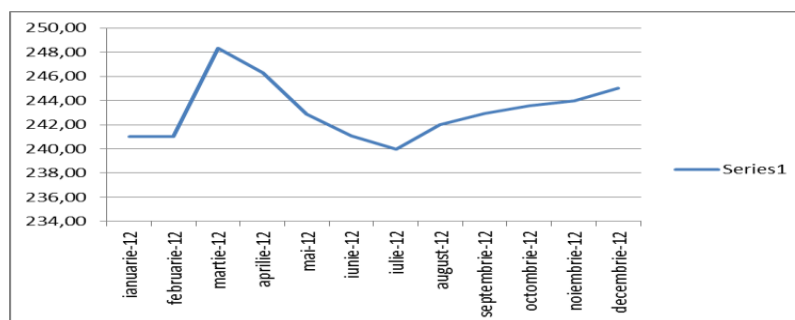
- Bilateral contracts negotiated between producers and suppliers
- On a Centralized Market organized and administrated by OPCOM

The price of Green Certificates varies in a range established by Government Decision:

$$[P_{min} \div P_{max}]$$

The minimum price is imposed in order to protect the producers and the maximum price to protect the consumers. For the period 2008-2014 the trading value of Green Certificates ranges between a minimum value of 27 euro/certificate and a maximum value of 55 euro/certificate. The value in Romanian Currency (Lei) will be calculated at the exchange rate determined by Romanian National Bank as the average exchange rate for the month of December of the previous year. (Law 220/27.10.2008).

Market price for GC in the year 2012



Actors

Romanian Regulator for Energy – ANRE

Producers of electricity from renewable energy sources

Suppliers of electricity to final consumers

Transport of System Operator – TSO

S.C. Opcom S.A.

The role of ANRE

- Qualify electricity producers which use RES eligible sources, to participate on the Green Certificates Market
- Can modify the yearly mandatory quota in the period 2005- 2007, in the first decade of December, when the installed capacity in the power plants which use RES cannot assure the demand of Green Certificates
- Controls the mandatory quota fulfillment by the suppliers
- Applies penalties for quota non-fulfillment

The role of Suppliers

Suppliers are obliged to buy yearly a number of Green certificates equal with the mandatory quota multiplied with the amount of electricity sold yearly to their final consumers.

The role of the Transport and System Operator – TRANSELECTRICA

- Monthly receives from the producers and the Network Operators where the producers are connected notifications concerning the quantities of electricity from RES delivered into the network.
- Monthly issues Green Certificates to producers for the quantity of E- RES produced and delivered into the network in the previous month.
- Collects the amount of money corresponding to the penalties from the suppliers which non fulfilled their quota at the end of the period of conformity. The amount of money resulted from the enforcement of the penalties, collected by Transport and System Operator, is allocated yearly by ANRE, based on objective criteria, for investments, to facilitate the access to the transport/distribution networks. (Law 220/27.10.2008)

The role of OPCOM

- Registers the participants on the Green Certificates Market
- Forecasts and publishes the demand and the offer of Green Certificates Market at the national level.
- Registers the bilateral contracts for Green Certificates trading between the electricity producers from RES and the electricity suppliers
- Set up and administrates the Green Certificates Register
- Provide the trading framework for the Green Certificates Market on the Centralized Green Certificates Market.
- Receives the sell/buy offers for Green Certificates from the Producers/Suppliers
- Determines and publishes the Centralized Green Certificates Market Clearing Price and the number of Green Certificates traded each month on the Centralized Green Certificates Market.
- Publishes each month the cumulated demand and the cumulated offer of Green Certificates for the current year.
- Determines the payment obligations and the receiving rights for the Centralized Green Certificates Market participants.

The Centralized Green Certificates Market assures:

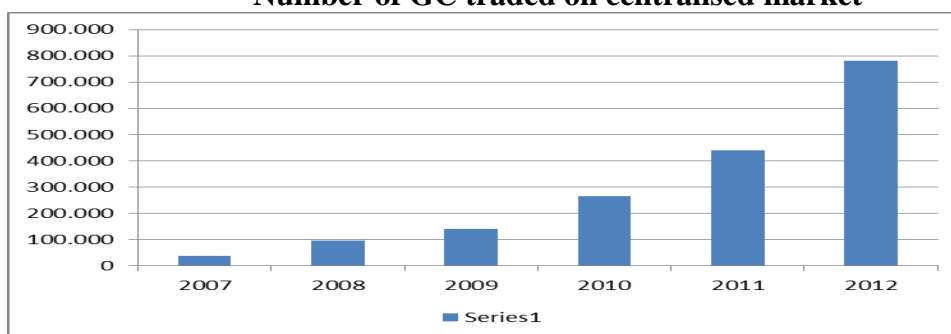
- Competition, transparency, nondiscrimination
- Trading prices reduction
- Determination of the reference prices for other transactions on the Green Certificates Market.

Centralized Green Certificates Market functioning:

- OPCOM registers participants on the Centralized Green Certificates Market.
- The Participants send monthly sell or buy offers, in the Offer Interval.

Green Certificates Market Operator:

- Undertakes the offers and transmits receiving confirmations
- Validates the offers and transmits Notifications concerning the offers acceptance or rejection.
- During the Transaction Day, determines the number of Green Certificates traded and the Centralized Green Certificates Market Clearing Price (CGCMCP)
- Elaborates and transmits to each participant the Settlement Notes Centralized Green Certificates Market Clearing Price (CGCMCP) and Number of Green Certificates Determination
- The offers represent couples price-number of Green Certificates: at least a couple and maximum three couples.
- CGCMCP and the number of GC traded are determined at the intersection point of the curves offer-demand.

Number of GC traded on centralised market**Accounting treatment of green certificates**

The accounting regulations according to the IV-th Directive of the European Economic Communities, provided in the addendum of Order no. 3055/2009 of the Ministry of Public Finance, published in the Official Journal of Romania, Part I, no. 766 and 766 bis, dated 10 November 2009, and later, have been further amended by Order 1118/2012, with the main changes to the accounting treatment of greenhouse gas emission certificates and of green certificates, as well as some clarifications in relation to their fiscal treatment, so Order 1118 / 2012 amending and completing Order 3055/2009.

Two new paragraphs have been introduced stating that greenhouse gas emission certificates may be distinctly included in the category of fixed assets (for greenhouse gas emission certificates purchased to earn profits in the long term – article 117, par. (4)) and in the category of short term investments (for greenhouse gas emission certificates purchased to earn profits on the short term - article 168, par (3)).

Another change made to the Accounting Regulations relates to the accounting treatment of green certificates, traded according to the law, by introducing subsection 8.3.3 “The accounting treatment of green certificates.”

The legal framework for regulation of green certificates is set out in Law no. 220/2008.

Green certificates (GCs) are instruments that attest to the production of a certain amount of electricity from renewable sources.

Until the enforcement date of this Order, the GCs had been assimilated, from an accounting point of view, with greenhouse gas emission certificates. However, taking into consideration the different GC system, a distinct accounting treatment has been introduced for these certificates.

Treatment of GCs applicable to producers of electricity from renewable sources

Upon receipt of the GCs issued by the transport and system operator (OTS), producers of energy from renewable sources must distinctly record the GCs in account 508 “Other short term investments and related receivables,” in correspondence with accrued revenues (account 472 “Accrued revenues”). The accrued revenues will be recorded in the profit or loss account as the green certificates are sold. Upon initial recognition, the GCs are evaluated at the transaction price available at that date, as provided by the electricity market operator, OPCOM.

At the end of the financial year, the GCs are evaluated using the transaction value provided by OPCOM for the last transaction. The differences arising will be recorded in the result of the period, as revenue (account 768 “Other financial revenues”) or as an expense (account 668 “Other financial expenses”).

GCs which are cancelled because they have been received by an accredited economic operator in addition to its normal quota (if they have not yet been traded) are recorded in account 668 “Other financial expenses”.

The treatment of GCs applicable to electricity suppliers

Electricity suppliers and producers that have the obligation to buy, on an annual basis, a certain number of GCs, must register an expense in account 652 “Environmental costs.” If the green certificates are purchased before the deadline provided by law, these will be registered in account 471 “Accrued expenses” and subsequently, at the legal due date, the GCs will be recorded in account 652 “Environmental costs.”

In case other entities that purchase GC for the purpose of earning profits on the short term, the certificates are assimilated to short term investment (recorded in account 508 “Other short term investments and related receivables”).

At the end of the financial year, the GCs are evaluated and recorded in the accounting books in the same manner as for electricity producers (by recording a financial revenue, together with a financial expense).

Suppliers that do not purchase the required annual number of GCs must pay to the Environment Fund Administration the value of the certificates not yet purchased at a price of 110 Euros.

GCs are valid for 16 months from their issue date. The value of GCs which are cancelled because they have not been used within the validity period will be recorded in account 668 “Other financial expenses”.

Procedures and accounting articles for green certificates

The normative act regulates mainly the accounting records and used accounts for purchase, reception with free title and cession of green certificates.

Applicable accounting treatment is determined according with the length of detention in heritage of those certificates, long or short term. Also a brief section of present document is dedicated to takeover procedure claims from third parties, when the company estimates that it will not recover the full amount of the claim and is instituted the company obligation to constitute value adjustments.

In function of certificates possession, those can follow one of the following accounting treatments:

- will be accounted in the category of financial assets if holding period is longer than one year;
- will be accounted in the category of short time investments if the intention of the company is to make transactions of those in less time than one year.

For both situation, the normative document dispose recording in distinct analytically accounts and are different from other financial assets or short-time financial investments.

Producers of electricity from renewable sources receive green certificates with free title from electricity system and transport operator. These will be highlighted in category accounting of short-term investments of income advance. Registration value of green certificates is given by value of financial titles transaction from the date of receiving green certificates provided by OPCOM SA.

As the sale of green certificates, these will generate taxable incoming registered in the income account.

Accounting registering, receiving certificates:

508	=	472	<i>at</i>
Other investments - analytic issued certificates		Incoming registered in advance	<i>transaction value</i>

Sell to a customer

If this is registered for VAT purpose in Romania, the sell is subject to the reverse charge according to article 160 from Tax Code:

4111	=	764	x
Customers		Incoming from financial investments	

Decrease from certificates management:

664	=	508	x
Expenses with financial investments		Other investments - analytic issued certificates	

Close the revenue account in advance:

472	=	764	x
Incomes registered in advance		Incomes from financial investments	

Is not double incoming, certificates was conferred with free title and should generate incomes from receiving time but the law adopted the tax at resell.

If the green certificates are in company heritage at the end of financial exercise, those should be evaluated at the existent transaction value date December 31 posted by OPCOM SA.

In function of transaction price can be realized incomes or expenses connected with certificate evaluation.

Accountability registration for incomes:

508	=	768	x
Other investments - analytic issued certificates		Other financial incomes	

for expenses:

668	=	508	x
Other financial expenses		Other investments - analytic issued certificates	

There are situation when other electricity producers - those that use fossil fuels (coal, oil, ...) has the obligation to purchase green certificates at certain deadlines established by HG 780/2006 regarding green certificates trading, as amended.

Bookkeeping accountability is performed as follows:

508	=	401	x
Other investments - analytic issued certificates		Suppliers	

652	=	508	x
Environmental expenditure		Other investments - analytic issued certificates	

If green certificate purchase is performed before legally time, will be used account 471 "Expenditure in advance", and at the established legally time is recorded like operating expense.

CONCLUSIONS

Green certificates represent the renewable value or greenness of electricity produced from renewable sources, and are used to simplify the burden of verifying compliance with renewable energy targets and provide flexibility in meeting the target . GC can be banked, traded or consumed and can be sold bundled with the underlying physical electricity or separately to it.

The Green Certificate is a document attesting a quantity of 1 MWh of electricity produced from renewable energy sources.

The renewable sources eligible to participate in the Green Certificates trading system are hydro energy used in plants with an installed capacity of maximum 10 MW, wind energy, solar energy, geothermal energy and associated fuel gases, biomass, biogas, gas from fermentation of waste and gas from fermentation of sludge from wastewater treatment plants.

The accounting treatment of greenhouse gas emission certificates and of green certificates, as well as some clarifications in relation to their fiscal treatment, are presented by Order 1118 / 2012 which amending and completing Order 3055/2009, the accounting regulations according to the IV-th Directive of the European Economic Communities, provided in the addendum of Order no. 3055/2009 of the Ministry of Public Finance, these clarifications are presented into the paper, also the procedures and accounting articles for green certificates.

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