
ENERGY FOR ROMANIA FROM RENEWABLE RESOURCES

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Abstract:

The European Union admits the fact that energy is essential, for the development of the European economy, but that it also constitutes a challenge, due to the impact on climate change. In Romania, as well as in all the countries of the European Union, which have chosen to promote renewable energy, governments have come up with support frameworks for investors in this field. In Romania's case, the option for green schemes and compulsory quotas was selected, meaning that each energy producer, which produces renewable energy, receives a number of green certificates for each MW produced, depending on the technology it uses. The price of such a green certificate varies between 27 – 55 Euros. The statistics of the European Energy Association show that Romania is ranked 7th among E.U. countries with investments in wind parks. Specialists mention that solar energy is much more efficient, because solar parks can be spread all over the country. Through the hydro-energetic potential of our country, hydro-energy can ensure national energetic security. In order to attract foreign investors into projects, for energy from renewable resources one requires new transport lines, tuning stations and equipments, for solar and wind parks. Until 2020, the Romanian state will make available for investors, at least 10 billion Euros. Producers of energy from renewable sources can sell their certificates to suppliers of energy, at a price dictated by supply and demand.

Keywords: climate change, support scheme, renewable sources, green certificates, compulsory quota, wind energy, solar energy

Within the Durable Development Strategy of the European Union, revised in 2006, the energy policy is considered crucial, because it must account for climate changes at a European and Global level. At the European Council of March, 2007, the European Union assumed the following objectives: the reduction, until 2020, of CO₂ emissions by 20 %, to increase renewable energy by 20 % of the total energy consumed, as well as increasing energy efficiency by 20%.

The usage of renewable energy sources constitutes the major objective of the legislative framework concerning climate change and renewable energy sources, presented by the European Commission on January 28th 2008. This objective of the European Commission is much more exigent, concerning its application term, than the

objective within the Durable Development Strategy of the European Union, revised in 2006. In all the documents, the European Union admits the fact that energy is essential to the development of the European economy, but also that it represents a challenge from the point of view of the impact of the energy sector on climate changes. The majority of European states depend on the import of energy resources and of the tendency of increases of energy price, on the world market.

As a member state of the European Union, Romania has presented the National Action Plan to the European Union, with the mentioning of objectives concerning the percentage of renewable energy in transports, electricity, heating and cooling, but also measures which must be undertaken, to achieve these objectives. According to this plan, in 2013, 12 % of the brute internal energy consumption will be covered by renewable sources, and at the end of 2020, of all the energy that will be consumed, 24 % will be from renewable sources, and concerning the brute consumption of electric energy, the percentage of green energy to be of 38 % at the end of 2020.

As a country that signed the Kyoto protocol, Romania participates at the limiting of the energy sector on climate changes, through the reduction of gas emissions with greenhouse effect with 10 % by 2013, as compared to 1989. Also, it will actively take part in converging objectives for the second period of implementation, post-2012 of the Kyoto protocol, within the Framework Convention of the United Nations.

In order to sustain the assumed objectives, Romania, together with other member states of the European Union, which have chosen to promote renewable energy, comes with support schemes, for investors in the field, choosing the option of green certificates and of compulsory quotas. This means that, every energy producer, from renewable sources receives, for each MW of produced energy, a number of green certificates, and the price of such a certificate varies between 27 – 55 Euros.

In July 2011, Romania received a favourable notice from the European Commission to support renewable energy sources. According to this notice, for each MW of energy produced from renewable energy, the investor will receive a number of green certificates, according to the technology it chose. Green certificates are a strong stimulus for international investors, willing to allocate funds towards the production of renewable energy, regardless of the weather conditions such as drought, blizzard or freezing rain.

Until 2020, the Romanian state will make available 10 billion Euros for investors within this field, and international investors promise energy projects, using wind, sun, water and biomass.

According to the new support scheme, for each MW of wind energy produced, two green certificates are granted. This support framework will be maintained until 2017, and from 2018 will receive only one green certificate, and the total scheme will have a total duration of 15 years, being available for units created until 2016.

From the statistics of the European Wind Energy Association, it results that, in 2011, in Romania 520 MW were installed, in terms of wind parks, which represent 5%

of the total new capacity, installed at the level of the 27 member states of the E.U. the same source mentions that in 2011, 9.616 MW were produced in wind parks, a value of 12,6 billion Euros, which means that in Romania, investments of 680 million Euros were made, our country being ranked 7 in a top made by the European Union and first in the region. First places belonged to Germany, Great Britain and Spain.

In the last few years, wind energy had an ascension in Romania, and, at the end of 2009, 14 MW were installed, at the end of 2010 460 MW, and at the end of 2011, the total capacity of wind parks reached 982 MW.

We notice that the great energy groups of Europe have made massive investments in wind parks in Romania, due to the generous aid scheme, which the Romanian state revealed, as well as due to favourable weather conditions in Dobrogea and Moldova. We appreciate that investments in wind parks are risky, precisely due to weather phenomena, which at the beginning of this year made for the elimination of wind turbines from the system, threatened by freezing rain, and which caused considerable havoc, by destroying equipment and electrical installations.

The biggest winners of the support scheme for wind parks are the Czechs from CEZ, which in 2011, a favourable weather year, have cashed 39,8 million Euros, from green certificates, which account for 300 MW of installed capacity. In this context, the Czechs promise that in 2012 they will finalize 1, 1 billion Euro investments, in the biggest wind park in Romania. Also, the Italians of Enel have invested in wind parks in Dobrogea which have an installed capacity of 270 MW and which promise to continue investments in such projects. Another large energy group which have invested in important wind capacities is Energias de Portugal.

After two years of wind park investment supremacy, specialists state that investments in solar energy are much more efficient, because they are not affected by drought, blizzard, freezing rain, and they will have an even larger contribution in sustaining the renewable resource energy.

Investors in solar energy projects are at the beginning, and at this time 51 solar parks are being built, which account for 500 million Euros of investments, and with an installed capacity of 210,3 MW.

In 2012, 14 solar parks will be operational, whose value will be of 150 million Euros, and the solar equipment producers claim that costs will be lower than those of wind energy.

At the European Union level, the investments made to obtain energy from renewable sources are new investments in solar parks, with a total capacity of 21.000 MW, appreciated throughout Europe.

In the state aid scheme through green certificates and compulsory quotas hydro energy is a part of this, created in units smaller than 10 MW. For new units, each MW is rewarded with 3 green certificates, and if hydro plants are refurbished they receive two green certificates, for each MW. If units have not done so, they will receive a green certificate for each 2 MW produced. Hidroelectrica is the largest energy producer in Romania, with a 30% normal quota.

At IMF pressure, Hidroelectrica, together with other state companies, join the second group of companies in 2012, proposed for an I.P.O., initial public offering of 10 % of their stocks and an increase of capital. At this time, a private manager is sought after, and the company is intended for stock listing. Romania, with an acknowledged hydro energetic potential, should invest in new production units, by attracting foreign investors, to ensure energetic security. This represents a strategic direction within the energetic policy, agreed with the European Union, which comprises of maintaining national sovereignty on primary energy resources. We believe, that this form of energy, from water, is cheap and non-polluting, and ensures the energetic security of our country, if the state maintains the power of decision, regardless of the form of property and management.

In order for Romania to become more attractive in the coming years for investments in renewable energy sources, further investments are required, in order to increase transport and tuning infrastructure. In order to increase transport networks, specialists estimate 500 million Euros, on a long term, an investment, which the Romanian state cannot finance by itself.

In spite of the ascending evolution of renewable energy production, there is no such investment from scratch in Romania, and almost 75 % of projects are only equipments. At this time, in Romania there is no factory which could realize the equipments for the parks which produce energy from renewable sources, and all installations come from imports.

As a member state of the European Union, Romania has certain obligations to fulfil concerning climate shifting and clean energy, concerning the percentage of renewable energy within the final energy consumption. In this context, the application of the green certificate system obliges producers to purchase the resulted energy, in a quota of 9-10 %, from the brute energy consumption, as reported to the amount of energy sold to consumers. The proof of fulfilling this percentage is given by the number of green certificates purchased. Energy producers from renewable resources can commercialize electricity production on a free market, where they will receive the price of green certificates, as a result of supply and demand. For energy suppliers, the purchasing of green certificates are costs, which will be included in invoices towards the population and companies, as they are the ones that finance renewable energy development in Romania.

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