

## PROPOSALS REGARDING CLIMATE CHANGE AND ENERGY FOR 2030

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### **Abstract**

*Climate policies are fundamental for the future of our planet, while a truly European energy policy is a key factor for our competitiveness. It's mandatory a new European energy policy which must accept the real energetic motivations regarding sustainability and greenhouse gas, security of supply and dependence on imports, competitiveness and efficient functioning of the internal energy market. An ambitious target of 40% reduction in emissions of greenhouse gases for 2030 is the cornerstone of the most efficient in terms of cost on our path towards a low-carbon dioxide. And at least 27% target for renewable energy is an important signal to investors to provide stability, boost green jobs and support security of supply. Using renewable energy sources (wind, solar and photovoltaic, biomass and biofuels, geothermal and heat pumps) undeniably contributes to limiting climate change. In addition, it helps to secure energy supplies and to create and increase employment in Europe, thanks to increasing local energy production and consumption.*

**Keywords:** security, energy, European Union, strategy, economics, climate, carbon dioxide

**JEL classification:** E23, O22, O39, F29

### **Introduction**

Energy security is a very complex concept that has evolved throughout history from the point of view of the subject - initially the concept was attached oil, gradually extending to other resources, and the area of meanings, from physical supply related to all stages of the energy chain. For most professionals, energy security is to be provided in terms of resources, control and distribution routes and alternatives. In a broad sense, the concept is defined as "secure resources at a reasonable price", in other words encompasses a much broader issue than the triangle security of supply - sustainability - competitiveness. [5]

In the current economic climate, in a globalized space, domestic energy strategy in the context of changing trends and changes taking place in the context of development in Europe and worldwide. Known oil proven reserves can sustain current levels of consumption only until 2040, and the gas until 2070, while world reserves of coal provides for more than 200 years to an increase in the level of operation. [7]

The economic growth, we believe that will follow, will have a higher consumption of energy resources. In terms of the structure of primary energy consumption worldwide, evolution and prognosis of the reference made by the International Energy Agency (IEA) for the next decade shows a significant increase in the share of renewables.

The above elements underlying the reorientation energy policies of the countries that are net importers of energy, to increase attention to renewable energy and improving energy efficiency.

In Europe and worldwide there is a wide range of fuels and biofuels that with other types of ways of producing "green energy" (solar energy, thermal energy, wind energy, voltaic etc.) can provide viable solutions for the energy future the world. [8]

Increasing energy security and tackling climate change are two of the concerns and challenges of contemporary society. Both are linked intrinsically to the way we produce and consume energy. And both energy security and climate change have implications for foreign and security policies. One of the major challenges for the European Commission, and generally for the EU is how it can provide competitive energy and "clean" for Europe, taking account of climate change, escalating global energy demand and uncertain future resources. [9]

In terms of specific methodological approach elaborations of this paper, the first part will be referred to the theoretical concept of sustainable development, from identifying real conceptual origins and evolution based on its treatment methods in the literature and in the economic, social and Policies that will be drawn and specified some wide criticism expressed by renowned authors, that will punctuate the main controversies of the concept of sustainable development is now part.

As specific methodological analysis elaborations paper we started from a basic set of questions and answers identifying relevant research topics are constiuie the concept of climate change and energy, including for the following period.

The objectives of the research analysis: general global energy policy, ways of achieving energy security, energy security - part of economic security, energy security in the EU's vision.

Energy Commissioner Günther Oettinger said: "The 2030 EU expressed willingness to promote progress towards a competitive low carbon dioxide, the investment stability and the security of energy supply. My goal is to ensure that energy remains affordable for households and businesses. The 2030 sets a high level of ambition in terms of climate change, but recognizes also that this objective must be achieved at lower cost. Internal energy market provides the basis to achieve this goal and will continue to strive towards its conclusion to use its full potential. This includes the "Europeanization" of renewable energy policies. "[10]

Connie Hedegaard, European Commissioner for Climate Action, said: "We managed to contradict the statements of those who claimed that today the Commission will not present any ambitious proposal. A 40% reduction in emissions is the goal of most efficient in terms of costs for the EU, which takes into account our responsibility globally. And of course, Europe must continue a strong focus on renewable energy sources. Therefore, it is important to today's Commission proposal for a binding EU target. They have now agreed the details of the framework, but the direction is heading towards Europe was established. If all other regions would be equally ambitious on climate change, our world would look much better. "[11]

The need for a new European energy policy need to accept the actual energy motivations regarding sustainability and emissions of greenhouse gases, security of supply and dependence on imports, competitiveness and efficient functioning of the internal energy market. The importance of knowing a new European energy policy is necessary to have a more effective response to these challenges, regarded as a common objective in all Member States. It requires a new industrial revolution that will create an economy with high energy efficiency and low CO2 emissions.

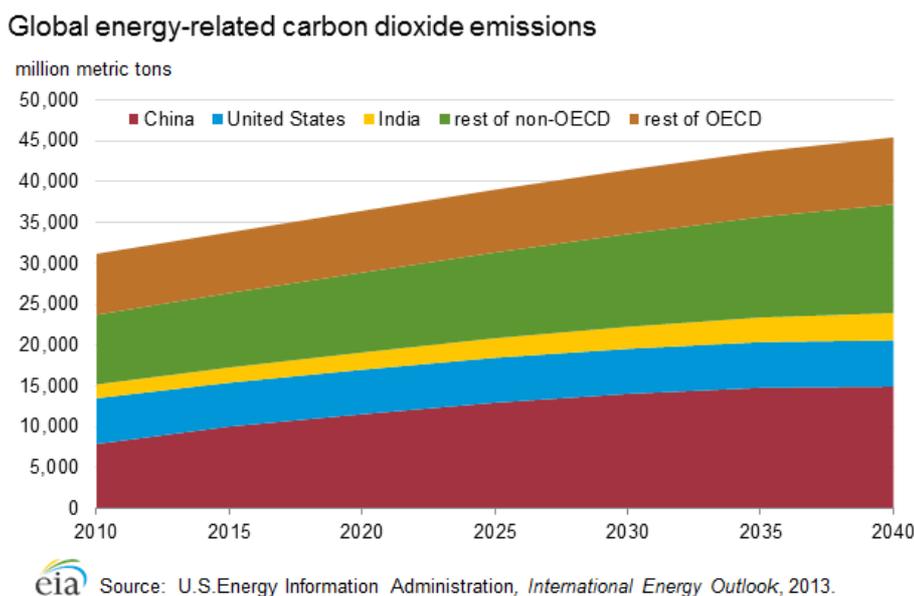
The establishment of the EU to achieve common goals major energy; achievement of the internal energy market, achieving a competitive market, an integrated and interconnected market, a public energy security, guarantee of security energy supply, reduction of greenhouse gas emissions, energy technology development, implementation of an international common energy policy.

#### **Climate and energy targets for 2030 for the EU economy competitive, secure and low-carbon**

European Parliament calls for further adoption by the EU new targets on climate change to be achieved by 2050: reducing emissions by 80 greenhouse gas emissions, 60% share of renewable energies in total energy consumption and improve energy efficiency by 35%. MEPs believe that the most effective way to improve energy security, including in terms of cost, is energy saving, requiring Member States and the Commission to adopt a binding target of improving energy efficiency by at least 20% by 2020.

The European Commission launched on 10 January 2007 a set of measures to redefine the European Union's energy policy towards energy security, global warming process management and boost competitiveness. Solution Commission strategy has three main objectives, namely finalization of the single energy market, accelerate the transition to alternative energy (as little carbon based) and energy efficiency. Scientific research profile would be allocated to funds supplemented with 50% during the current financial year (2007-2013). [12]

Table 1. Global energy-related carbon dioxide emissions



European energy policy is threefold: combating climate change, limiting the EU's vulnerability to imported hydrocarbons, promoting employment and growth, thereby providing secure and affordable energy to consumers.

Currently, 23.5% of the electricity produced in the Union and 14% of final energy consumption in all sectors comes from a renewable energy source. Therefore, the EU is on track to achieve the target that 20% of our energy is from renewable sources by 2020, although further efforts will be needed to achieve this goal. Also, this provides a solid foundation to continue efforts and to achieve a more ambitious target on renewable energy sources by 2030. [13]

The Commission proposed the establishment of such an objective in the EU at least 27%. [1]

A reduction in greenhouse gas emissions (GHG) emissions by 40% below 1990 levels, a binding target of at least 27% across the EU for renewable energy, renewed ambitions for energy efficiency policies, a new system of governance and a set of new indicators to ensure a competitive and secure energy system. These are the pillars of the new EU framework on climate change and energy for 2030, presented on 22 January 2014 by the European Commission. Energy accounts for 80% of emissions of greenhouse gases in the EU.

Being committed to fighting climate change, the EU is committed to reducing domestic emissions by at least 20% by 2020. In addition, it calls upon the signing of an international agreement whereby developed countries to commit to reducing greenhouse gas emissions by 30% by 2020.

Under this agreement, the EU would set the new target of reducing its emissions by 30% compared to 1990. These goals form a central part of the EU strategy for mitigating climate change. [14]

Or, reducing emissions of greenhouse gases requires the use of more low energy and greater use of clean energy.

### Energy Efficiency

Reducing energy consumption by 20% by 2020 is the objective of the EU and established the Energy Efficiency Action Plan (2007-2012). [15]

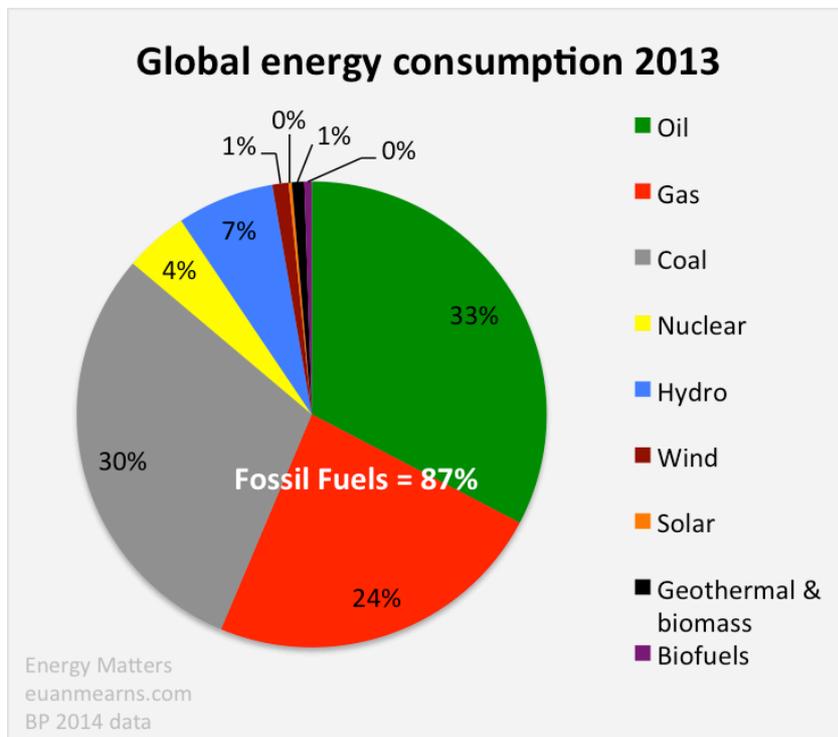
To this end, efforts should be made concrete, especially in terms of energy saving in the transport sector, setting minimum efficiency requirements for energy-using equipment, energy consumer awareness about rational behavior and economy, improving production efficiency, transportation and supply of heat and electricity, and the development of energy technologies and energy performance of buildings.

In addition, the EU understands the need for realization of a common approach on a global scale, energy saving through an international agreement on energy efficiency.

### Renewable Energy

Using renewable energy sources (wind, solar and photovoltaic, biomass and biofuels, geothermal and heat pumps) undeniably contributes to limiting climate change. In addition, it helps to secure energy supplies and to create and increase employment in Europe, thanks to increasing local energy production and consumption.

Table 2. Global energy consumption 2013



Renewable energy sources have remained, however, a marginal position in the European energy mix, the cost of maintaining the higher than traditional energy sources.

For renewables to better enforce EU has set the roadmap for renewable energy binding minimum target for renewable energy 20% of all energy sources by 2020. [16]

This objective requires progress in three main areas covered by renewable energy: electricity (increasing the production of electricity from renewable energy sources and ensuring sustainable electricity production from fossil fuels, particularly through the development and capture systems CO<sub>2</sub> storage), biofuels by 2020, will be the 10% of transport fuels and finally heating and cooling systems. [17]

In October 2014, the European Union (EU) has set ambitious climate and energy targets for 2030, confirming global leadership on climate change.

But while the objectives are formulated and adopted the legal framework for their implementation is still far from being achieved. Energy Policies of IEA Countries: European Union - 2014, provides guidance on how to get in a cost-effective, integrated, while promoting competitiveness and energy security of the European Union. The recommendations are based on experience from the first in-depth evaluation of EU Alliance in 2008. [18]

Since then, EU policy has led to energy market integration, cross-border trade and implementation of energy and climate objectives by 2020. The European Union is a global leader in the transition to a low carbon economy: the unprecedented boom European renewable energy, energy efficiency action and economic recession have contributed to a decrease in emissions of greenhouse gases.

However, energy security issues have increased. Making the most of its diversity, the European Union should strengthen the internal energy market to enhance both energy security and competitiveness of its industry. However, the interconnections are missing, and despite opening the wholesale market and falling prices, focusing on retail markets, regulated, do not benefit consumers.

As Member States to adopt more decarbonisation pathways and new options for energy policy, rules are needed and policies that support the development of low carbon technologies in new energy and climate policy framework for 2030 with a market energy efficiency.

The European Parliament has always argued in favor of renewable energy sources and stressed the importance of setting binding targets for 2020 [2] and, more recently, for 2030. In February 2014 the Parliament adopted a Resolution [3] criticizing the Commission's proposals on the climate and energy for 2030 as limited and lacking in ambition. He asked obligation 30% of EU energy consumption to come from renewable energies, to be achieved by individual binding national targets and objectives extend beyond 2020 on transport fuels.

In addition, Parliament called in the past long-term establishment of a system of incentives for renewables EU-wide [4], advocating also to support smart grids. [5] The Parliament also repeatedly invited the Commission to propose a legal framework for renewable energy for heating and cooling, in order to increase their share in energy production.

By adopting the Directive on renewable energy, the European Parliament strengthened and clarified several mechanisms, establishing also a system to ensure a more thorough environmental sustainability of the whole policy.

On 24 October 2014 the European Council approved a framework 2030 energy and climate objectives proposed by the European Commission, to be achieved by 2030: EU mandatory to reduce by at least 40% of emissions of greenhouse gases by in 2030 compared to 1990; at least 27% of energy from renewable sources to be used at EU level; increase energy efficiency by at least 27% by 2020 to be reviewed in view of the EU 30% for 2030; completion of the internal energy market by reaching a target for electricity interconnection between member States 15% and implementing in the future of certain major infrastructure projects.

Such a policy framework agreed by U.E. Emissions of greenhouse gas emissions, renewable energies and energy efficiency should provide stability and predictability for economic operators and confirm EU leadership globally. The European Council also reiterated the goal of building a Union of Energy aimed at energy affordable, safe and durable.

### **Conclusions and Recommendations**

The experience of recent years, especially the recent crisis that swept the global financial and economic system as a whole, shows that there can be no prosperity and social peace without ensuring safety at all levels, including economic security. Now more than ever reaching a certain level of economic security depends on the state's ability to aggregate resources internally and gain or maintain access to external economic resources. Energy security, like special side of economic security, is closely related to any action or inaction of any owner-operator chain actor-producer-distributor-consumer carrier, directly or indirectly related to energy resources, with the goal of influencing or control other actors. The risk of such energy continues to be a constant facing any economy dependent on external energy resources, regardless of its degree of development. Interdependence continues to be the vector of achieving energy security. Energy security of an actor can mean energy security other actors interconnected with it.

European energy policy in recent years has always adapted to new geopolitical, geo-economic and geo-strategic and sought to ensure, in a much more integrated, affordable energy supplies, respecting market mechanisms, promoting energy efficiency and environmental protection. However, we believe that we need a comprehensive energy strategy that clearly identify vulnerabilities and major risks to pinpoint strategic objectives achievable and ways to attain them, and, especially, the course of action in the medium and long to ensure a higher level of energy security.

Any discussion about Romania's energy security should start from a simple reality, namely national energy resource reserves are reduced continuously, and Russia is the main energy source to cover the deficit of our country. In

these circumstances, governments have set ambitious targets in the national energy strategy, which if it could be made to maximize the energy potential of our country has particularly and would fail to satisfy their energy needs at a price as low, in terms of quality and food safety.

Although the state remains the owner of relatively high energy, Romania can not meet the conditions of the financial crisis, globalization and increased competition on regional and international markets, domestic consumption needs. Therefore, we believe that our country's energy security can be achieved mainly in European energy interdependence, but in a mutually beneficial partnership of the European Union with Russia. Romania's energy security can mean greater energy security at European level and increase energy security community means greater energy security for our country.

In conclusion, we can say that working hypothesis established at the beginning of this paper, namely oil demand which increases at a much faster rate than supply, and major hydrocarbon reserves are located in areas characterized by profound political and economic imbalances and instability, facts that have become competition for energy resources in the contemporary world in a significant source of crises and conflicts, has been confirmed. Competition for oil seems to dominate the beginning of the millennium, with focus on the polarization states of the Gulf, Caspian, Eastern and Western Siberia, Southeast Asia etc. Interesting is that even the disputes and conflicts are focusing in the same spaces. Moreover, the close link between energy and conflict derives from their essential characteristics: the vital importance for economic and military power of nations and unequal geographical distribution.

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