# EUROPEAN ENERGY UNION: A FURTHER STEP AHEAD OR REORGANIZATION?

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# EUROPEAN ENERGY UNION: A FURTHER STEP AHEAD OR REORGANIZATION?

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ABSTRACT

EUROPEAN ENERGY UNION: A FURTHER STEP AHEAD OR REORGANIZATION

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European Coal and Steel Community, which laid the foundation of today's European Union in 1957, gathered the six founding countries around energy issue. The Union, which enlarged its territory in time by increasing the number of member states, moved away from the energy issue and took more concrete steps regarding economic integration, meanwhile rapidly increased external energy dependency as a result of limited indigenous resources. A serious awareness arose and serious steps were tried to be taken at the Jose Manuel Barroso's Commission Presidency term. During Barroso's presidency, the Commission stressed that the way to hurdle the situation gets through creation of a common energy policy and the first concrete step was taken through including energy and environmental issues into the areas of shared competence with the signing of Lisbon Treaty in 2007. The works on common energy policy have been continuing in Jean-Claude Junker's term who took over the Commission presidency in 2014, and the Energy Union Package was published in February 2015. The main objective of this study is to determine whether the EU's energy policy desire was a new thing or a long-

lasting effort for establishing a common energy policy. This is the pioneer or one of the pioneer studies investigating the Energy Union in the light of former common energy policy suggestions. The implications were discussed in the chapter, “Analysis and Results”, and the findings contributed to the analysis. Consequently, the analysis provided that the Energy Union Package made no significant difference to previous common energy policy drafts; the Package is meticulously prepared, and more organized, comprehensive and structured.

Keywords: European Union, Energy Union, European energy policy, energy policy, energy security, internal energy market

# ÖZET

## AVRUPA ENERJİ BİRLİĞİ: İLERİ BİR ADIM YA DA YENİDEN YAPILANMA MI?

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1957 yılında bugünkü Avrupa Birliği'nin temellerini atan Avrupa Kömür ve Çelik Birliği, altı kurucu ülkeyi enerji konusu etrafında bir araya getirmiştir. Zaman içinde üye ülke sayısını artırarak topraklarını genişleten Birlik, enerji konusundan uzaklaşıp ekonomik bütünleşme konusunda daha somut adımlar atmış, bu sürede kısıtlı yerel kaynaklar neticesinde dış kaynaklara olan enerji bağımlılığını da hızla artırmıştır. 2004 yılında Avrupa Birliği Komisyon Başkanlığı'na seçilen José Manuel Barroso döneminde ciddi bir farkındalık oluşmuş ve bu konuda somut adımlar atılmaya çalışılmıştır. Barroso'nun başkanlığı süresince Komisyon, durumu aşmanın yolunun ortak bir enerji politikası oluşturmaktan geçtiğine vurgu yapmış ve 2007 yılında imzalanan Lizbon Antlaşması ile enerji ve çevre konuları paylaşılmış yetki alanlarına dâhil edilerek ortak enerji politikası alanında ilk somut adım atılmıştır. 2014 yılında Komisyon Başkanlığı görevini devralan Jean-Claude Juncker ile ortak enerji politikası çalışmaları devam etmiş ve Şubat 2015'te Enerji Birliği Paketi yayınlanmıştır. Bu çalışmanın temel amacı, Birlik düzeyinde ortak bir enerji politikası oluşturulması yeni bir fikir ya da uzun süreli

bir çaba olup olmadığını belirlemektir. Bu çalışma, eski ortak enerji politikası önerileri ışığında Enerji Birliği'ni araştıran öncü çalışma veya çalışmalardan biri olabilir. Yapılan çıkarımlar, "Analiz" ve "Sonuçlar" bölümünde ele alınmış ve bulguların analizine katkıda bulunmuştur. Sonuç olarak, Enerji Birliği Paketi'nin daha önceki ortak enerji politikası taslaklarına ciddi bir fark yaratmadığı, Paket'in onları da kapsayarak daha titizlikle hazırlandığı; daha tertipli, kapsamlı, anlaşılır ve yapılandırılmış olduğu anlaşılmıştır.

Anahtar Kelimeler: Avrupa Birliği, Enerji Birliği, Avrupa enerji politikası, enerji politikası, enerji güvenliği, iç enerji piyasası

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TABLE OF CONTENTS

LIST OF FIGURES

FIGURE

# CHAPTER 1

## 1. Introduction

No one can imagine a world without energy; in every aspect of life, every moment of any given day, all economies in the world are dependent on energy to sustain their economic growth. The original six[1] who laid the foundation of the today's European Union exactly 65 years ago were aware of this. After two devastating world wars, they were extremely weary and their economies were almost destroyed. For the development of the geography they are in and to resolve any possible future disputes, they gathered around the vital resources of the period and founded the European Coal and Steel Community (ECSC) in order to ensure the fair distribution of the coal and steel (Dinan, 2005, p. 2).

In 1957, the Community expanded the cooperation to the economic and nuclear energy field and created the European Economic Community (EEC) and European Atomic Energy Community (EURATOM) under the Treaty of Rome. The aim of the EURATOM was to ensure the safe and secure utilization of radioactive materials and support the improvement of nuclear for serene purposes. The EEC, however, founded a common market which abolished custom duties and led economic growth and development in 1960s. Concordantly, security of supply became a major issue and a European energy policy laid on this was first embraced in 1962 in a resolution prepared by the Council. When the first enlargement happened, with the accession of the United Kingdom, Ireland and Denmark in January 1973, Arab- Israeli War occurred in October and resulted in a global oil crisis (EUROPA, 2015). The Community members met in Copenhagen Summit and agreed on a Community level energy policy, for the first time, aiming at reducing the effects of oil supply crisis. Thus, a concrete policy was not laid down (European Commission, 1995).

After the creation of a common market, the Community began to concentrate more on economy. The accession of Greece in 1981, and Spain and Portugal in 1986 induced further integration. The Single European Act, signed on the 1st of February, 1986, is a milestone in the Community's history. While aiming at the

[1] **The original six** is the six countries who are the founding fathers of the European Coal and Steel Community (ECSC). These are Belgium, France, (West) Germany, Italy, Luxemburg and the Netherlands.

completion of the internal market in 6 years, which would ensure free movement of goods, people, capital and services, the treaty also provided the Community's institutions new competences and helped to extend the areas of cooperation to foreign policy (Bache & George, 2005, pp. 150-165).

The Maastricht Treaty, entered into force on November 1, 1993, officially founded the European Union on three-pillar system; the first pillar containing ECSC, EEC and EURATOM; the second pillar containing common foreign and security policy; and the third pillar containing justice and home affairs. The first pillar is supranational which means the EU's decisions are above the national ones while the second and third pillars are intergovernmental; member states would come together and cooperate. In the same year, the single market was completed (Bache & George, 2005, pp. 166-176).

The fourth enlargement happened in 1995 when Austria, Finland and Sweden joined the Union. The creation of a single currency, Euro, furthered the economic and monetary integration in 2002. The largest enlargement -ever- took place in 2004 with the accession of ten countries; Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovakia and Slovenia. In order to bring development and good governance to the continent, the EU welcomed Bulgaria and Romania in 2007. By the end of the year, the Lisbon Treaty, which amended previous treaties to adapt the Union new member states, was signed (EUROPA, 2015).

The Commission dwelled on energy issue during José Manuel Barroso's presidency between 2004 and 2014, and tried to introduce a common energy policy. Several drafts were prepared and submitted to the Parliament and the Council. Additionally, the Lisbon Treaty, signed in 2007 and entered into force in 2009, extended the areas of shared competence to energy, trans-European networks and environment; however, neither the Commission's drafts nor the Treaty conduced to the introduction of a Union level energy policy (European Commission, 2014).

As seen, the EU was started from the point of energy; however, in time, economy mattered more and a Union level energy policy could not be adopted yet. The

Energy Union Package presented in February 2015 demonstrated that the Union has been again trying to prioritize the energy issue.

The study here aims at analysing whether the European Energy Union is a new framework or a result of a long-lasting effort for establishing a common energy policy. Was the energy issue previously really deprioritized? If not, what were the former efforts? Were they different from the Energy Union Package, comparing and contrasting with the former common energy policy efforts and the Energy Union?

The study will first examine how policies are made in the EU, and then examine historical background on energy policy development of the Union. It will continue with qualitative content analysis to evaluate former common energy policy drafts and previous legislations on energy, and comparative analysis to compare and contrast them with the Package to determine whether the European Energy Union is a further step ahead or reorganization.

# CHAPTER 2

## 2. Methodological and Theoretical Framework

### 2.1. The Main Methodology of the Study: Qualitative Content Analysis

> Research refers to the systematic method of consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analysing the facts and reaching certain conclusions either in the form of solution(s) towards the concerned problem or in certain generalizations for some theoretical formulation (Kothari & Garg, 2014, p. 1).

Each research study has to have a research methodology to be scientific, and to make the research more proper. The research methodology implies the process which is used by the researchers through describing, explaining and predicting phenomena. In other words, it aims at giving the work plan of the research study (Rajasekar, et al., 2013, p. 5). Concordantly, the methodology used in this study is qualitative content analysis. The purpose of qualitative content analysis is to supply comprehension and knowledge of the case under study. The methodology is defined as a research methodology which is the subjective commentary of a textual data by way of systematically coding and describing topics or patterns (Hsieh & Shannon, 2005, p. 1278).

Qualitative content analysis was first arisen from anthropology, sociology and psychology with the aim of investigating the meanings underlying physical messages (Zhang & Wildemuth). Although the methodology has generally been used in medical researches, it has also been used in social sciences to examine any type of texts; documents, interviews, archival records, direct observation, participant observation and artefacts have been used as data, more specifically source of evidence, in this way of analysis.

Ole R. Holsti, a significant American political scientist and academic, defined content analysis as a systematic and objective technique for gathering information which could prompt drawing of implications. It evoked researchers that qualitative content analysis was not just about gathering information and counting occurrences of the keywords, yet could be utilized to advance comprehension.

Furthermore, the analysis can prompt the recommendation of answers to research questions and the improvement of the theory (Cavanagh, 1997).

The study here has used qualitative content analysis methodology because it has been conducted in more than 100 textual documents. The methodology has some basic research steps to apply it smoothly. These steps are; 1. concrete research question; 2.linking the research question to a theory; 3.definition of the research design; 4.defining the sample material and the sampling strategy; 5.methods of data collection and analysis; 6.processing of the study, presentation of the results in respect to the research question; 7.discussion in respect to quality criteria (Philipp, 2014, pp. 10-14).

There are three types of content analysis; conventional content analysis, directed content analysis, and summative content analysis. Each of the three types is utilized to decipher significance from the substance of the text data. Briefly;

- Conventional data analysis requires reading the data as a whole to derive keywords and these keywords are identified during analysis. Points seen as significant are noted to use during analysis. Additional keywords can be determined after reading the data several times. Researchers using this type are able to get broader understanding,
- Directed content analysis begins from a theory which helps the researchers to find an answer to their questions. Keywords can be defined before or during data analysis. Researchers using this type are able to broaden the already existed theory,
- Studies utilizing summative content analysis usually begin with describing and quantifying determined words with the aim of comprehending the contextual usage of the words or content. Quantification here is not for the extrapolating the meaning, however, it is for investigating the usage. Summative analysis does not analyse the data as a whole; instead, it handles the text word by word. In summative analysis, study starts with keywords. These keywords are identified before the data analysis, and they are obtained from interest of researchers or review of literature. Researchers explore for occurrences of the keywords by computer or by hand. At the end, frequency is

counted and calculated for each keyword (Hsieh & Shannon, 2005, pp. 1283-1286).

For decades, numerous studies have used content analysis. Berelson and Salter (1946) conducted a content analysis which emphasized the media under representation of minority groups. Their study covered a prejudice that was a consistent discrimination against minority groups of Americans in popular magazine fiction. The researchers examined 198 stories which were published in popular magazines between 1937 and 1943, and explained their outcomes in categories like distribution of characters, their role, appearances and their goals.

Chai (1978) carried out content analysis on the political conflict in Red China following the death of Mao Tse-Tung in 1976 using 40 obituary notices which were received by the central committee of the Chinese Communist Party since it was not possible for an American researcher to investigate direct Chinese response to Mao's death.

Schamber (2000) used content analysis method and conducted a descriptive examination into "the criteria that occupational users of weather information employ to make relevance judgements on weather information sources and presentation formats." The researcher used time-line interview method in order to gather information from 30 participants; 10 from construction, 10 from electric power utilities and 10 from aviation. All of these participants excessively needed weather information. Their interviews were recorded and transcribed and these transcripts were utilized as the main sources of data for content analysis, and content analysis was used as both secondary observation tool and analytical tool.

Concordantly, the study here has used conventional content analysis; the data, legislations on the EU's energy issue, are read and examined word by word to later employ the comparative analysis method and compare and contrast them with the starting point of the study here, which is the European Energy Union Package.

## 2.2. Postmodernist (or Poststructuralist) Framework

In accordance with the qualitative content analysis, the study has to be linked to a theory after the determination of a concrete research question. The study here has used postmodernism and constructivism since the two theories are intertwined.

Critical theories[2] were established in international relations discipline to criticize mainstream theories, mainly realism; and postmodernism (or poststructuralism) and constructivism criticise already existing phenomena (Burchill, et al., 2013, pp. 285-290).

International politics hinge on abstraction, representation and interpretation since there are not pre-prepared categories, theories, observations or interpretations. People who deal with international politics, political leaders, scholars or students, are involved in these abstraction, representation and interpretation even if they are aware of or not. Nevertheless, no one can impose these as legitimate knowledge. Critical approaches of international relations purpose to comprehend significance of interpretation, investigate the link between knowledge and power, and examine the role of politics of identity in creation and comprehending of global affairs. Postmodernism or poststructuralism is not a paradigm that states explicit opinions about actors, events, reasons or results; it is a critical approach which questions metatheory to comprehend what knowledge is, who is able to know it and in which ways knowing can be defined (Campbell, 2013).

The theory of poststructuralism or postmodernism was created in the 1980s with the contributions of Richard Ashley, James Der Derian, Michael Shapiro and Rob Walker. The earliest writings were about the dominance of realism. Realism is a state centric theory, and postmodernism analysed how "state" could become the privileged actor in international politics. The later writings have been about political events and their representations (Campbell, 2013).

According to postmodernists, things that are seen, measured, or the methods that are employed are the products of human construction which are mainly based on perception and cognitive process influencing by understandings and meanings.

[2] Critical theories mentioned here is not "the **Critical Theory**" as a theory in international relations; however, an approach that this thesis is implementing in order to criticise.

Moreover, the language we are using is the reflection of set of values that belongs to any culture (Viotti & Kauppi, 2009).

The most apparent and influential characteristic of the postmodernism in international relations is "its systematic denaturalization of the real and the given, with the aim of social critique in the name of some ethical good" (Burke, 2008). Jean-François Lyontard, one of the significant postmodern thinkers, argued that all postmodern thinking is about rejection of grand-narratives; he defended that these are large scale theories and they should be approached with a suspicious view. The truth, he said, must be deconstructed, and if it is, it can challenge the dominant opinions that are imposed as truth (Viotti & Kauppi, 2009, p. 343).

The theory examines ethical or normative issues. Nevertheless, postmodernism also has a desire to contest current practices and concepts of international reality. Its purpose is not to free all claims from truth, still,

> to demonstrate how modern social structures, institutions and events are historically bound and contingent; how they are the products, not of human nature, the laws of politics, the progress of history, or the cunning reason, but of human action and thought in a world without stable foundations (Burke, 2008, p. 359).

Michel Foucault was one of the most influential postmodernists, and he stressed the significance of the critical attitude in these words:

> A critique is not a matter of saying that things are not right as they are. It is a matter of pointing out on what kinds of assumptions, what kinds of familiar, unchallenged, unconsidered modes of thought the practices that we accept rest.

Foucoult, Wendt and Adler argued that there is a close relationship between knowledge and power in international relations. He argued that knowledge is the outcome of a political proceeding which has a mutual link to power. This is accurate in international relations, as well as in all parts of political life where there is power use. This is not a realist point of view on power; however, instead of an emphasis on the endeavour of actors and commentators to force legitimate explication on occasions. Thus, language structures reality and the advancement

of linguistic expressions end up in a structure or system comprising of knowledge, subjects or objects. For instance, the advancement of idea of sovereignty and related terms and suppositions, like state, anarchy, borders, security and human identities, is at the centre of many of postmodernists' studies in international relations (Viotti & Kauppi, 2009, p. 342).

The postmodern theory has two different textual strategies; deconstruction and double-reading. Deconstruction is about construction of a text document or a theory, as well as deconstruction of it. Double reading, however, is different. According to Jacques Derrida, one of the influential philosophers of the theory, it is both loyal and unmerciful at the same time. The reading consists of two steps; first reading is for clarifying or repeating the document; it indicates how a text document or an institution provides stabilization. The primary aim here is to demonstrate the occurrence and the stabilization of the phenomenon under analysis. Briefly, it shows how a text or an institution occurs or is constructed. Second reading, on the contrary, examines malfunctions or faults of this phenomenon. The approach argues that no one document or institution can be completely stable or consistent, there are, often, discrepancies or chaotic things in it. It tries to show the inconsistency of the document or institution through stressing its discrepancies (Burchill, et al., 2013, pp. 257-260).

Concordantly, the study here has adopted the double-reading strategy to analyse the European energy policy attempts; first, the documents has been summarising while trying to find the reason behind their occurrences, and second, they have been compared and contrasted while trying to point the malfunctions of insufficiencies in them.

### 2.3. Constructivist Framework

According to Marc A. Genest, a public diplomacy professor in the U.S. Naval War College, there are branches of postmodernism, and the most influential and widely known ones are constructivism and feminism (Genest, 2004, p. 259). And constructivist side of the theory is employed in the study.

Postmodernists' critical suspicions on realism and liberalism are maintained in constructivism; nevertheless, they also aspire to create theory in a distinct way

which is based on where interests and identities of the states originate from. The theory examines international relations in broader social relations. One of the constructivist approaches is cantered upon how actors utilize language to construct the social world which they are a part of, and how this social world forms them. Rules, which are both legal and non-legal, inform people of how to enact under particular circumstances, and have an indispensable role since they are centred between people and society. Therefore, they pave the way for mutual construction. Basic international relations' notions like anarchy, sovereignty, regimes etc. are examined with regard to their relation with rules. Another constructivist approach concerns more with the shaping of states' interests by "rule-governed" or "norm-governed" interconnection than the role of language. Liberalist point of view sees norms and rules as mediators of selfish attitudes of the states. However, constructivists assert that norms do more than the liberalists' claim; how states' ideate their interests and identities are affected by norms. More clearly, constructivism, itself, pays particular attention on how norms affect states' interests and attitudes (Goldstein, 2001, pp. 144-146).

As stated above, constructivism is a critical theory. According to Viotti and Kauppi, although the theory tries to analyse the affairs of world politics through notional and theoretical explanation, it does not offer a global or worldwide vision of international relations, on the contrary, "it offers an approach to interpretive understanding that already has enormous effect on theorizing through the international relations field" (Viotti & Kauppi, 2009, p. 276).

The philosophical and sociological establishments of constructivism are profound, comprising of scholarly advancement. The main intellectuals who have a significant impact on later constructivists are Immanuel Kant, John Locke, Emile Durkheim and Max Weber.

Immanuel Kant (1724-1804), the German Philosopher, indicated that the knowledge we have, or we think we have, is the consequence of our subjectivity; it enforces our mental system on nature as well as on the social world of that all of us a piece. Constructivists who are suspicious pursue this way of thinking[3]. They

[3] Immanuel Kant is well-known with his "Transcendental Idealism" (source: http://plato.stanford.edu/entries/kant/). In the mentioned source, it is stated that sceptical Constructivists are affected by his way of thinking; it does not state that Kant is Constructivist.

argue that people get appearances; however, then they try to explore what they observe. Knowing, they state, is such an activity that is remarkably subjective try (Viotti & Kauppi, 2009, p. 278).

The theory claims that actors and institutions are correlatively constructing each other. Norms and opinions that have been institutionalized are defining the meanings and the identities as well as political, economic and cultural actions of the actors. Social structures which determine actors' identities and interests are occurred by interaction. According to Christian Reus-Smit, one of the leading constructivist scholars and international relations professor at the University of Queensland, claims that actors have the ability of envisagement; social structures define what is possible, what are the boundaries in front of the actions and which strategies are needed to implement for accomplishing their goals. Institutionalized norms and opinions signify what is necessary and possible both ethically and practically. He indicates actors use wide-spread norms and thoughts to legitimize their actions and behaviours. Contrary to materialist and rationalist theories, scholars of the constructivism present how international norms occur, how opinions and values shape the political actions, how arguments and discourses affect the political outcomes, and how identities shape the subjects. Michael Barnett and Martha Finnemore, international relations scholars, claim that international organizations founded for serving the interests of the states gain the autonomy and shape their behaviours. When states are creating a system, they are also creating a society which has the common culture and social and legal norms; therefore, different state communities have idiosyncratic cultures (Burchill, et al., 2013).

In addition, constructivists argue that identities of the states are complicated, changeable and originated in interaction with other states which can be called "socialization". As time passes by, states' identities and interests can change as there is no danger of anarchy, security dilemma or arms races. In that contest, European Union can be the best example; a continent which experienced several armed conflicts and two devastating world wars that killed millions of people in the first half of the 20$^{th}$ century. However, by the end of the 20$^{th}$ century, war or any armed conflict became incogitable. Today's European identities are engaged with the European Union. Constructivists argue that such concepts that power

politics, anarchy and military force are not able to express this change; changes in the identity, norms, regimes and institutions can explain well. International organizations, they say, are able to spread norms pointing appropriate and inappropriate attitudes. Hence, it is ideas, rules and norms that drive the state behaviour, not power and self-interest (Goldstein & Pevehouse, 2006).

### 2.4. Secondary Methodology: Comparative Analysis

Although the study here has used qualitative content analysis as research methodology, it has been also supported by comparative analysis to identify the similarities and the differences between previous energy policies and current "Energy Union".

> Comparative political and social research is generally defined in two ways: either on the basis of its supposed core subject, which is almost always defined at the level of political and social systems (Lane and Ersson, 1994; Dogan and Pelassy, 1990; Keman, 1997), or by means of descriptive features that claim to enhance knowledge about politics and society as a process (e.g.: Roberts, 1978; Macridis and Burg, 1991; Almond et al., 1993).

Comparative method is a method that aims at discovering empirical relationships among variables; it is not a method of measurement. The method can also be called as a basic research strategy (Lijphard, 1971).

"Comparison is a fundamental tool of analysis" said David Collier, a political science professor in the fields of comparative politics. He continued:

> It sharpens our power of description, and plays a central role in concept-formation by bringing into focus suggestive similarities and contrasts among cases. … The forms of comparison employed in the discipline of political science vary widely and include those contained in statistical analysis, experimental research, and historical studies (Collier, 1993).

Arend Lijphart, a political scientist specialized in comparative politics, expressed:

> Given inevitable scarcity of time, energy and financial resources, the intensive analysis of cases may be more promising than the superficial

> statistical analysis of many cases. In such a situation, the most fruitful approach would be to regard the comparative analysis as the first stage of research, in which hypotheses are carefully formulated, and the statistical analysis as the second stage, in which these hypotheses are tested in as large a sample as possible (Lijphart, 1971, p. 685).

The strong side of the comparative analysis which makes it different from other methods is that it can present further descriptive variables. The method has often used small number of cases. The cases used should be chosen analytically and the scientific search should have the purpose of reaching stochastic, not collective, generalizations (Lijphart, 1971, p. 686).

Up to now, a number of studies have used comparative analysis method. Özdemir (2013) conducted a comparative analysis to compare Switzerland, Morocco and Turkey. The principal objective of this study is to identify the essential differences between these three states in order to understand whether they are liberal democracies. The analysis was state-focused which means concentrating on the intensive comparison of an aspect of politics in a few countries that are normally selected to introduce variation into the dependent variable. The analysis compared mechanisms that were important for the functioning of liberal democracy; these are electoral and party systems, the separation of powers with a focus on the independence of the judiciary.

Lemp, McWethy and Kockelman (1994) carried out a comparative analysis which was trip based on tour-activity based approaches, as well as traditional aggregate methods to micro simulation techniques. Their comparison also included estimations and observations about traffic flows.

Satoru Araki and Iris Claus (2014) prepared a report, on behalf of Asian Development Bank, which compared the administrative frameworks, functions and performances of tax administration bodies in 22 jurisdictions in Asia and the Pacific. The analysis used surveys of tax administration which were conducted in 2012 and 2013, and attempted to provide comparable data on tax systems and their administration.

The study here hinges on the critical approach of the postmodernism or poststructuralism to make criticism about the long lasting common energy policy attempts of the EU. As the theory refuses to assume "the given" or "the real" as it is, it should be examined with a suspicious approach.

In line with the theory, the Commission's ambition to create a Union-wide energy policy can be interpreted as the reflection of the values and norms belongs to the Union culture. The events or the institutions are the product of human nature and history; on behalf of the Union as a whole, the Commission tried to establish a common energy policy in response the affairs influenced it.

According to constructivism, the EU is the product of the social relations in international arena; the social geography, which the member states are the part of, forms the social environment, which is the EU.

The attitudes, interests and activities of the states are affected by rules and norms belonging to their culture; they shape their selfish attitudes. Moreover, the states and the institutions are in a correlation; they affect each other.

According to constructivist theory, actors use wide-spread norms and thoughts to legitimize their actions and behaviours; and the study here argues the Commission uses the Community culture, based on unity, solidarity, stability and European identity, to propose the establishment of a common energy policy.

The study here also has found the comparative analysis method beneficial to make the analysis more consistent and comprehensible; the method has used to find out the similarities and differences between former common energy policy proposals and legislations on energy, and the European Energy Union Package.

## CHAPTER 3

### 3.1. Policy Making in the EU

The chapter here has first given information on how policies are made in the European Union and then a brief summary on energy policy development in the EU.

The European Union laws are created with respect to its treaties. They are the "legal basis" of the legislation. The Treaty of Lisbon, signed on December 13, 2007 and entered into force in 2009, clarified its voting procedure and how the Union would work. Most of the legislation is approved through ordinary legislative procedure in which the legislative power is equally divvied up among the European Council and the European Parliament (European Commission, 2014).

The Council and the Parliament make decisions in some policy areas, such as trade, customs, competition rules and monetary policy of Eurozone; this means the EU has exclusive competence. However, the EU shares its power with member states in other policy areas while passing legislations at the Union level, this is called 'shared competence'. Areas of shared competence are internal market, consumer protection, transport, energy, environment and agriculture. Additionally, national governments can develop their own energy resources; however, they must consider the Union's renewable energy targets (European Commission, 2014, p. 8).

Decision making process is launched by the Commission. It encourages the public, businesses and the governments to express their opinion while preparing a proposal. The proposal is fed on their views and sent to the Council and the Parliament. Although the Commission has the right to prepare a proposal by its own will, in some cases, it can be asked to do so by the Parliament, the Council or the EU citizens (European Commission, 2014, p. 5).

When the proposal is sent, the Parliament and the Council analyse and debate over it. They can send back the proposal to the Commission if they consider it necessary to amend. The Commission resends the proposal after the amendment, and the Council and the Parliament do second reading. If they cannot agree on the

text, they send it to a reconciliation committee, which includes representatives from both the Council and the Parliament in equal number, to deliberate. Representatives from the Commission can also participate in discussions to make contribution. If committee members agree on the text, they send it to the Parliament and the Council. After the third reading, the proposal can be assented as a law. In ordinary legislative procedure, the Parliament uses simple majority voting, and the Council uses qualified majority voting, which requires favour of EU countries at least 55% (European Commission, 2014, p. 7). In other words, countries representing at least 65% of the total EU citizens support the proposal (EUR-Lex).

In some policy fields, such as internal energy market exemptions and competition law, the Council can act alone; it is required to invite the opinions of the Parliament but this does not mean the Council must accept the opinions. This is called consultation procedure (European Commission, 2014, p. 7).

There are also advisory bodies in the EU which must be consulted while preparing a proposal in an area that belongs to their province. Although the Council and the Parliament do not have to take into account the opinions of these bodies, their advice is significant for the functioning of the democracy in the EU (European Commission, 2014, p. 7).

- *The European Economic and Social Committee* comprise social interest groups, trade unions and employers. The Committee is responsible for many areas, such as planning of the energy supplies.
- *The Committee of the Regions* is responsible for insuring that the wishes, requests and complaints of the local and regional governments are heard. The Parliament and the Commission have to confer with the committee in the fields that influence local and regional governments, such as civil protection, climate change and energy.

### 3.2. Energy Policy Development in the EU – A Brief Summary

As described in treaties and political declarations, policies are developed through "the important political principles of subsidiarity, proportionality, and better regulation" in the European Union. The reason why it is done so is to guarantee a

democratic, representative and transparent way in which policies are progressed. Accordingly, proposals for a new energy policy are created with consulting stakeholders as well as national authorities, regional bodies, industrial associations, companies, consumers and non-governmental organizations within this framework. However, attempts to create a common energy policy will always show deference that each member state is amenable for its national energy mix, and indigenous energy resources of member states are their national wealth, not the European (Kanellakis, et al., 2013, p. 1021).

As in all policy areas, energy policies have been submitted through the EU legislation based on treaties since the creation of the EU.

### 3.2.1 Historical Background

Energy issue has been at the core of the Union since its foundation. The early creation of the European Union in 1951 started with the aim of energy security, mainly security of supply, a joint control over coal and steel, in particular, which were the key sectors of the economy and war industry at that time. The treaty establishing European Coal and Steel Community was signed by the six founder states, Belgium, France, West Germany, Italy, Luxemburg and Netherlands. By founding the Community, a "cross jurisdictional control" on the energy sources was put into practice which led a significant economic cooperation. Nonetheless, the member states were aware that coal was an exhaustible resource and they must found an alternative to meet their demand. Correspondingly, in order to ensure the secure usage of radioactive materials and support the improvement of nuclear for serene purposes, European Atomic Energy Community was created as a supranational body in 1957 through Rome Treaty, which also officially founded the European Community (Kanellakis, et al., 2013).

In 1956, Common Assembly of the European Coal and Steel Community drew up two memorandums as Monthly Information; "Energie – Marche Commun; Projets et Opinions (Energy – Common Market; Projects and Opinions)". The documents made up of 3 parts; first conventional and nuclear energy, second common market, and third EURATOM and its relation with common market. Each section was prepared in detail (Assemble Commune, 1956). It can be understood that these memorandums were the first attempt to create a common energy market.

In March 1960, a method was suggested by the Committee to coordinate member states' national energy policies, and in January 1961, a list of measures was suggested as preparation and to be taken promptly (the Inter-Executive Energy Committee, 1963, p. 3).

On February 20, 1962, the Parliament of the European Communities prepared a resolution which listed the principles underlying a "common energy policy" (the Inter-Executive Energy Committee, 1963);

- reduction of costs of energy,
- security of supply,
- gradual application to avoid sudden disturbance of national economies,
- long-term stability of supply,
- freedom of choice for the consumer, and
- a single market.

On July 25, 1962, High Authority of the European Coal and Steel Community and Commission of the European Economic Community prepared a bulletin named "Mémorandum sur la politique énergétique (Memorandum on Energy Policy)". It had two different sections; "Les faits et les perspectives (The facts and perspectives)" including "the prices of crude oil and refined products, security of supply, coal and nuclear energy", and "Les propositions en vue de la réalisation d'un marché commun de l'énergie (Proposals for the achievement of a common energy market)" including "for the oil, for coal and for nuclear energy". The bulletin identified the definitive system and the period of transition to reach it, and the preparatory period for the implementation of the proposals given (Commission de la Communauté Economique Européenne, 1962).

In 1963, a memorandum, "Energy policy in the European Community" was published by the High Authority of the ECSC. With this memorandum, the Community took a step for the first time to form a "common energy policy" which was seen as a necessity for creating a common energy market. On April 1962, a meeting was held in Rome, and the High Authority of the Coal-Steel Community, the Common Market Commission and the EURATOM Commission agreed on the joint proposal for a common energy policy. They saw the energy

policy essential because energy was one of the key drivers of all economic activities, and any threat to supply security could result in hard-to-recover situations; a country's and it's industries' situation in international trade arena was partially determined by energy prices, and most of the labour force was employed in coal industry. The objectives and the methods, which entailed both long term targets and transitional rules, for enabling the harmonization of national energy policies progressively and forming an inclusive common energy policy were defined. The paper also analysed in detail the energy position of the Community at that time and prepared an outlook (the Inter-Executive Energy Committee, 1963).

However, the 1960s was also the decade when dissimilar opinions emerged among member states; some of them were supporting and subsidizing nuclear power to take an action against rising dependency on imported fossil fuels while others chose to continue using oil, coal and natural gas. Therefore, energy policy ceased to be community level and became national level.

Soon after, in 1970s, the EC necessitated an energy policy formed at Community level after experiencing 1973 oil shock which resulted from Arab-Israeli war. Although the war seemed regional, most of the members of Organization of Petroleum Exporting Countries (OPEC) were from Arab countries and they imposed an embargo against states supporting Israeli military, mainly the United States, Netherlands and Portugal. The embargo included banning petroleum exports to those states and cutting down on oil production. Not surprisingly, the situation first doubled, then quadrupled the price of oil per barrel and this led to a global crisis affecting the global oil market because OPEC had the major say in pricing of the oil on markets all over the world (Office of the Historian, 2013).

Hence, governments of the EC member states met in Copenhagen Summit in 1974, and compromised over a "declaration on energy policy", which would guide them about energy supply and energy demand.

> Community energy affairs were originally dealt with by the ECSC and EURATOM Treaties. It was not until 1974 that the need for an energy policy strategy arose. Since then, energy policy has focused on reducing the consequences of oil supply crises (European Commission, 1995, p. 9).

The oil crisis of 1973 stringently affected the Community because the Community was the world's largest oil importer at that time and almost one third of its supplies were from Saudi Arabia and Libya. On December 17, 1974, the Commission published a resolution, "Community Energy Policy – Objectives for 1985". The main aim stated in the report was "to increase by every possible means the Community's independence of oil supply from abroad." To achieve this, the Commission proposed some objectives;

- to extensively use nuclear energy and raise its share in total electricity production to 50%,
- to keep up producing coal from its indigenous resources and to raise its import level from countries out of the Community,
- to limit oil consumption level by economically replacing it with other energy resources,
- to increase internal output of natural gas and its imports,
- to develop and establish necessary equipment for geothermal and hydraulic sites as well as to increase their contribution to total energy consumption.

The dependency on imported energy was 63% in 1973, and reducing the dependency to 50%, if possible about 40% was also listed among these objectives (Information Directorate-Generale, 1974).

However, in 1976, European Community Information Service announced that, according to statistics, the dependency on imported energy was holding steady at 57% (European Community Information Service, 1976). This means, objectives, which were set until that moment, were not applied successfully. The situation can be called as failure for the EC because for the first time the Commission set objectives on energy policy to achieve at a certain period of time.

In 1978, European Council met in Bremen on July 6-7, and confirmed the validity of previously established energy objectives which aimed at decreasing the dependency on imported energy to 50%, diminishing oil imports and using the Community's indigenous resources at optimum level. The Council also stressed that member states needed to coordinate their national energy policies at Community level because the situation at that time was analysed and some

negativity was spotted although imported energy dependency fell to 56%. Desired production level from nuclear and coal were not reached due to low level of economic activity. To be able to recover the economy and stabilize the market, preparing long-term energy policy at the Community level and aiming at lowest equitable and conceivable cost for security of supply was needed (Comission of the European Communities, 1978).

When Iranian Revolution affected the global oil market, the EC were still heavily dependent on imported oil. According to inland consumption of primary energy in the Community, the share of oil was 511.6 Mtoe in 1978, and, 525.4 Mtoe in 1979 and the production was only 63.6 Mtoe in 1978 and 90.3 Mtoe in 1979 (European Commission, 1980). The numbers clearly show the dependency level. Therefore, it is not hard to say that the Community was affected by rising oil prices that resulted from the Revolution. Economy suffered; energy prices hit industrial production and jobs as well. 54% of total consumed energy, mostly oil, was imported. The situation was the result of lack of security of supply and policy absence. In the light of these, on January 1980, the Commission published a paper, "New Energy Sources for the Community" which included what needed to be done;

- the member states should not waste energy but rather save it. This could re-activate economic growth;
- they should use coal in huge amount, the Community still have its own coal resources and using coal should be encouraged wherever possible;
- despite high investment costs and the opposition from public, the use of nuclear energy should be increased, because the Community also invested in research and development to make nuclear energy more secure;
- new energy sources like solar and geothermal should be supported.

The paper also specifically indicated that the need to a common energy policy was obvious; member states had already had common economic and social targets but lacked their driving power, "energy". Previously, the Six united around the coal, and that was the time for the Nine to unite around diversification of the supply to break the dependency ( European Commission, 1980).

The term “renewable energy” was used in a Community paper for the first time in 1981. That was prepared for positioning the Community for United Nations Conference on New and Renewable Sources of Energy in August 1981. This was also the first UN conference on energy issue. The paper stated that the Conference had to meet both industrialized and developing countries’ needs, and its aim was to increase the development and use of new and renewable energy resources especially in developing countries through national, regional and international projects. It was expected that the Conference would lead to diversification of energy worldwide, energy supply and demand balance, and transfer of know-how and technology (European Commission, 1981).

In 1984, the Community announced that 1990 objectives set in 1980 were almost fulfilled and there was a considerable amount of improvement in energy situation of the Community. Therefore, 1990 targets lost their relevance and new long term energy objectives, which would ensure the economic and social development through secure and efficient energy economy, were needed in order to continue with effective energy policies. Following objectives were proposed for the year 1995 (European Commission, 1985);

- at least a further 25% improvement in energy efficiency,
- less than one-third of energy consumption to be met by imported oil,
- to maintain, and if possible increase, the market share of natural gas,
- to maintain, and if possible increase, the market share of solid fuels,
- not more than 10% of electricity to be generated from oil and gas,
- approximately 40% of electricity to be generated from nuclear power,
- a tripling in new and renewable energy production by the end of the century.

In 1986, the Single European Act (SEA); in 1992, the Maastricht Treaty (also known as the Treaty on European Union) expanded the focus on energy issues and security of supply became top of the agenda. Though the SEA did not put emphasis on energy issue, it laid out a six-year program pursuing the creation of a “single market” as well as free-flow of trade across the Community borders. So, in May 1988, the Commission approved a working paper on the internal energy market.

Article 2 of the Maastricht Treaty set a target of "sustainable, non-inflationary growth while respecting the environment" that could affect the energy policy (European Commission, 1995, p. 8), and the Treaty of Amsterdam had the emphasis on the environment many times. The main aim was the protection of the quality of the environment through common actions (European Union, 1997).

It is necessary here to make a mention of "For a European Union Energy Policy – A Green Paper", which was presented by the Commission in 23 February 1995. It can easily be said that this paper can be called as "backbone" of the Energy Union. However, the paper was included in legislation; the Green Papers are prepared and published by the Commission of the European Union with the aim of stimulating certain discussion on a certain topic at Union level. The papers call the aforementioned actors, who can be individuals, organizations, governments or bodies, to engage in planning process and contribute to the proposals that they have submitted. They might result in primary law after being outlined in White papers (European Commission). The publication of this Green Paper sparked a debate benefited from discussions with national administrations, industries and social partners. It might support the EU to set new energy policy goals which could assist the actions of the member states, and the Community as well. Furthermore, the Paper could allocate the responsibilities of national and regional authorities, and the Community and the role of public authorities and industry. It indicated that there was a consensus between member states that "diversification of energy sources, a greater role for market forces and the reinforcement of energy efficiency efforts" were the running policy targets. A persistent balance was needed between the conflicting targets of competitiveness, security of supply and environmental protection (European Commission, 1995, pp. 8-32). Security of supply explained in detail in the fields of coal, oil, natural gas and electricity, and environment was also issued in this paper:

> ...sustainable growth respecting the environment is one of the Community's principle objectives; synergies between the objectives of competitiveness, energy security and environmental protection need to be developed; internalization of the environment policy into energy policy is to be pursued… (European Commission, 1995, p. 27).

The Kyoto Protocol adopted in 1997 later paved the way for the European Commission to launch out a "Union position" on energy security and climate change. As a result, on 19 May 1999, a communication from the Commission was sent to the Council and the Parliament "Preparing for Implementation of the Kyoto Protocol". After signing the Protocol, parties had to put it into force rapidly. The EU was aware and aimed to deploy all its efforts to ensure speedy ratification (European Commission, 1999).

### 3.2.2. The Period between 2004 and 2014

The year 2004 was significant for energy policy. On July 5, 2004, José Manuel Barroso, the prime minister of Portugal at that time was selected as the President of the European Commission and held the power until 2014.

During his presidency, the Commission adopted a new attitude and dwelled more and more on energy and climate change issues; it implemented strategies to fight against climate change and secure energy supply by promoting its partnerships with global leading energy actors and seeking the interest of Europe. In one of his speeches, Barroso stated that he was proud of the Commission's ambitious agenda to cope with climate change and to create a common energy policy aiming at secure, sustainable and competitive energy with a complete internal energy market. The significance of solidarity to tackle with emergency situations, i.e. a possible natural gas disruption, was highlighted on all occasions. Moreover, almost four out of five billion Euros of the Union's recovery plan funding was devoted to trans-European energy infrastructure (European Commission, 2009).

Energy saving was added in the Commission's agenda in 2005; the Commission wished to introduce new measures. On June 22, 2005, "Green Paper on Energy Efficiency", which called the authorities to make both household and businesses more responsible by awarding was published. Energy efficiency was considered as a tool to challenge increasing energy consumption and contribute economic development. The figures showed the Union was heavily dependent on imported energy, by 50%, and it had a potential to increase by 70% by 2030. Measures had to be taken to prevent the further increase. Transportation sector had more than 30% share in final energy consumption and it was dependent on imported oil products. The buildings were accounted for 40% of energy consumed in the

Union. And, even the electricity generation process wasted 60% of energy during production. The application of current legislations was seen as a must for increasing energy efficiency by 20% by 2020. But legislations at that time were able to achieve 10%, and further legislations needed to be laid down to meet additional 10% (European Commission, 2005).

On October 27, 2005, "a mandatory concept of energy policy" was agreed at the Council meeting in London; hence, it was an "informal approval" of European energy policy (Kanellakis, et al., 2013, p. 1020).

In 2006, the Commission of the European Communities took a step forward and published a new Green paper, "A European Strategy for Sustainable, Competitive and Secure Energy", which aimed at preparing an energy strategy for Europe that would balance sustainable development, competitiveness and security of supply. This showed a need to be explicit about what should be done about energy issue. The Commissioners were already aware that "the Europe had entered into a new energy era" and there were some things to do. The paper drew "a new energy landscape of the 21$^{st}$ century" for Europe; a landscape that affected everybody because energy access has been crucial for every single person as well as the Europeans. There was a desire to ensure security of supply, stable economic conditions and effective actions taken against climate change, and prevent high prices, threats to security of supply and climate. To achieve these, Europe needs a common response. 25 different national energy policies are not enough. A common energy policy that would raise a common voice could make the Europe the leader of global search for energy solutions. Accordingly, the paper involved six priority areas which could lay the foundation of a new energy policy for Europe;

- competitiveness and the internal energy market,
- diversification of the energy mix,
- solidarity,
- sustainable development,
- innovation and technology, and,
- external energy policy.

However, whether the member states agreed on the necessity of a common European energy policy was also the key question at that time (European Commission, 2006).

Environment, global warming and climate change were also significant issues for the European Union. On January 2007, the Commission published a Communication, "Strategy on climate change for 2020 and beyond". In this paper, the costs and benefits of fighting against climate change were evaluated and a package of actions which could limit the global warming to 2º was counselled. Some actions were concerned with the EU as a whole, for instance the target binding to decrease level of greenhouse gas emissions, and actions on energy. It was stated in the Act that measures which would tackle with climate change could bring substantial benefits. Reducing the level of fossil fuel consumption could contribute to security of supply and also economy through reducing the costs of these imported resources. While trying to decrease the share of fossil fuels in the total primary energy consumption, renewables could become the alternative; therefore it could also contribute to technology and employment. The Commission analysed the energy policy of the EU and recommended some measures (2007);

- improving the EU's energy efficiency by 20% by 2020,
- increasing the share of renewable energy resources to 20% by 2020,
- developing a safe environmental carbon geological storage policy.

On 10 January 2007, the European Commission published an action plan titled, "An Energy Policy for Europe" which was based on three leading issues; sustainability, security of supply and competitiveness. The 20/20/20 targets by the Commission were prepared to define "quantifiable targets" to reach the leading issues. Subsequently, the Lisbon Treaty, also known as the Reform Treaty, amended the Treaty on European Union and the Treaty establishing the European Community and covered an action plan including a "specific provision on energy" (Kanellakis, et al., pp. 1020-21).

The most concrete step to form a single energy policy was taken with the Lisbon Treaty in 2007. The Treaty established solidarity in energy and environment policy making in the EU. According to the Article 2C, energy became one of the

areas of shared competence between the Union and member states. Other similar shared competence areas were internal market, consumer protection, trans-European networks and environment.

Article 176A created four objectives that serve for the better functioning of the internal market, and protecting and improving the environment;

- to ensure the functioning of the energy market,
- to ensure the Union's security of supply,
- to support energy efficiency and saving and the new and renewable energy developments,
- to promote energy networks' interconnection.

The Council and the Parliament were authorized to found measures to reach the targets above (European Union, 2007).

Following this, in 2008, the Commission published, "EU energy security and solidarity action plan" which indicated that the significance of energy security and solidarity must be taken into account and the common energy policy should be founded on them (European Commission, 2008).

In 2009, 20-20-20 targets were declared in "2020 climate and energy package". The directive laid down three binding targets that had to be achieved by 2020;

- to improve energy efficiency by 20%,
- to reduce greenhouse gas emissions by 20%, and
- to raise the share of renewables in total energy consumption by 20%.

The directive is significant; it could be the first legislation binding all member states (European Parliament and Council of the EU, 2009).

In 2013 and 2014, a framework on climate and energy policies for 2030 was issued. The framework presented targets for 2030 which relied on the achievement of 2020 targets (European Commission):

- to increase the share of renewables by at least 27%,
- to reduce greenhouse gas emissions by 40%,
- to reach 27% energy savings.

### 3.5. The Energy Union

Despite all the efforts mentioned above, the creation of a common European energy policy has not been concluded yet. As the product of the long lasting efforts, the opinion of "Energy Union" was presented in a Communication by the Commission, in February 25, 2015. It is a 21 page package including climate policy as well.

The implementation of the existing legislations through strict control and enforcement is fundamental for establishing the Energy Union. The Union, in fact, is the intersection of many fields including energy, research and innovation, foreign policy, transport, regional and neighbourhood policy, agriculture and trade. The primary aim is to ensure that both households and businesses have more secure, affordable and sustainable energy and this can be realized through energy system transformation (European Commission, 2015). The Package will be analysed in detail in chapter "The Energy Union Package".

The chapter here has first given information on how policies are made in the EU, then a brief summary of energy policy development in the EU to supplement the following chapter which analyse the existing EU legislations on the energy.

## CHAPTER 4

## 4. Analysing the Existing EU Legislations on Energy

In order to apply content analysis method and then compare the legislations, which are about 500 documents, the study here first intended to use a software for data coding, and identified a number of keywords deriving from critically analysing the Energy Union Package. These keywords are: "*energy policy*", "*energy security (security of supply, security of demand)*", "*diversification*", "*dependency*", "*energy efficiency*", "*energy market*", "*internal market*", "*decarbonisation*", "*low-carbon (economy)*", and "*climate policy*". However, as the study progressed, the author concluded that using manual methods would be more useful and effective for this study to identify the progressive shifts. Legislations that include these keywords are found in the sub-branches of "Summaries of EU Legislations – Energy". Almost 100 legislations are the key components of energy policy, and they are easy to read in detail. Instead of skimming and scanning 500 documents, each of which contains 2 to 200 pages, scrutiny of 100 legislations is considered a far better choice to obtain accurate results. They are categorized under "Energy Efficiency", "European Energy Policy", "Internal Energy Market", "Nuclear Energy", "Renewable Energy" and "Security of Supply, External Dimension and Enlargement". At this point, it would be beneficial to give information about the types of European legislation.

Common policies are core for the integration and found on common legislations. Member states transfer their sovereignty to the decision making bodies of the EU; thus, unless otherwise stipulated, the common policies are superior to the national laws. In other words, they have binding status over member states. They are the results of legal acts that are settled and checked by the institutions of the Union and applied by the mentioned actors who can be member states or the institutions. The Article 288 of the Treaty on Functioning of the European Union (TFEU) listed following five legal instruments (Europedia, 2011).

- Regulations have a general scope with binding-status for all member states. They are precisely enforceable into the member states' domestic law without any rearrangement. They can be endorsed by the European Parliament and the Council or solely by Council or by the Commission;

- Directives, similar to regulations, have binding status on the member states or to whom they are addressed, and they can be adopted by European Parliament and the Council or by the Council or by the Commission as well. Distinctly, directives give mentioned parties liberty to establish their own form and methods; however, they still must be put into action by national law;
- Decisions are legislative instruments having binding status on addressed actors. They are rarely used and can be adopted by European Parliament and the Council, or by the Council or by the Commission;
- Recommendations are applied to call the aforementioned actor(s) act in an appropriate way without having any binding effect. Through a recommendation, the Commission or the Council can set up non-binding rules;
- Opinions are prepared to evaluate present situations in member states or the EU as a whole (Europedia, 2011).

However, the Article 290 of the TFEU also gives the Commission the right of embrace non-legislative acts, and this led to the development of following documents:

- Resolutions are established as a result of the desire to suggest mentioned parties to perform in the mentioned field. They are not binding and often shaped around guidelines;
- Communications are prepared by the Commission when the institution wishes. They are like suggestions. They have no legal effect, either;
- Green Papers are prepared to consult on a particular issue by the Commission in order to incite responses from relevant parties (European Commission).

For the sake of the completeness, the legislations will be compared under the headings below. The comparison starts with “Energy Efficiency”.

### 4.1. Legislations Regarding to Energy Efficiency

The energy efficiency theme was embraced under the directive titled as "Hot-water boilers" in 1992. In accordance with the Community's 1995 targets set in 1984, the hot-water boilers had to meet energy efficiency standards which were adjusted to the Union level. They must be manufactured as eco-design[4]. This could contribute to long-term energy saving, and also the security of supply (Council of the EU, 1992).

There had been no legislation listed until 2006. In 2006, focus was still on eco-design products. The EU and the United States jointly adopted "the Energy Star[5]" energy efficiency program. The Union put it into practice with a Council decision. Accordingly, the program aimed at enabling the consumers to use lower energy using equipment that could contribute to ensuring security of supply and environmental protection (Council of the EU, 2006).

The directive titled as "Energy end-use efficiency and energy services" laid down the framework for energy end-use and energy services. Different from the decision above, there is a 9% energy saving target here and it must be adopted and achieved by member states by 2016. Public sectors of the member states must adopt measures to increase energy efficiency. There must be transparency to make the internal energy market operators have accurate information. End-users were emphasized; they must have energy-auditing systems to determine the ways to improve energy efficiency (European Parliament and Council of the EU, 2006).

The Commission proposed the establishment of the Global Energy Efficiency and Renewable Energy Fund (GEEREF) in a namesake communication (European Commission, 2006). The aim was to organize private sector investments in energy efficiency and renewable energy projects in emerging markets and developing

[4] What is eco-design? Eco-design is considering and reducing the effect of a product on environment during extraction of its raw materials, manufacturing of the product, its marketing and distribution, the use and disposal of a product.
Source:http://www.ecodesign.at/einfuehrung/allgemein/ecodesign/index.en.html

[5] Energy Star was a voluntary programme, established by U.S Environmental Protection Agency (EPA), which helps households and businesses save money and protect climate through advanced energy efficiency. Source: https://www.energystar.gov/about?s=footer

countries. This was significant because the fund could contribute to sustainable development, measures to cope with climate change, and especially help to stabilize energy supply in impoverished regions in Africa, the Caribbean and the Pacific, North Africa, Eastern European non-states, Latin America and Asia.

The years 2007 and 2008 are significant for energy policy. Increasing energy dependency on external supplies disconcerted the decision makers, and prompted them to take some measures. In March 2007, leaders from member states agreed on reducing the energy consumption by 20% by 2020. This was equal to the closure of 400 power plants. In November 2008, the Commission prepared a communication that analyses energy efficiency situation of the Union, and has an aim to present a package containing detailed measures (European Commission, 2008);

- 30% less energy using buildings will be more common,
- eco-design production standards will be applied for commercial and industrial energy-using products, not just for household ones,
- energy efficiency will be applied to transportation sector as well as private vehicles through tyre labelling,
- electricity generation measures will be improved.

Consequently, the communication on eco-design energy-using appliances became a directive. The law included raw materials, manufacturing, packaging, supply and distribution processes. Manufacturers must ensure ecological production environment. Tyre labelling was applied as regulation in 2009 as well. All that meant that they gained binding status for all member states. This is significant because not all the communication papers become a community law.

In 2010, the Union focused on similar topics. Energy consumption of products was issued in a new directive again. But this time, the Parliament and the Council stipulated member states to raise awareness about energy consumption and how to use their energy using products in an efficient way, both households and industries (European Commission, 2010). Another directive remarked the share of buildings in total energy consumption of the EU; their consumption was accounted for almost 40%. National authorities were asked to enact law to decrease their consumption. Taken together, limiting the consumption could

contribute to decreasing the Community's energy dependency and reducing energy consumption by 20% by 2020 (European Commission, 2010).

In 2011, European Union Energy Efficiency Plan was prepared by the Commission (2011). Energy efficiency was described as vital for EU's energy policies having an effect on decreasing external dependency, reducing energy consumption, tackling with climate change and a lot more. The communication paper had following basic aims;

- decreasing energy consumption;
- supporting industries to use emission lowering equipment; and,
- encouraging households to use eco-design productions.

Another document titled as "Stepping up European Union energy efficiency efforts" followed the proposal in 2012 (European Parliament and of the Council of the EU); the directive mainly continued to present measures to achieve 2020 targets. Similar to previous directives, the main aims were to reduce external energy dependency, and to contribute to fight against climate change by decreasing greenhouse gas emissions. National governments' liabilities were highlighted. They were stipulated to form their own "energy efficiency obligation scheme" by 30 April 2013 and to transpose the laws by the mid-2014. Public authorities called to give boost to transition of internal energy market, eco-design production, and more efficient buildings and services.

The major impact of the energy efficiency on creation of an internal energy market was indicated again in 2014; it was entitled as key to have transition to a more competitive, secure and sustainable energy system. In addition to 2020 targets, 30% energy saving by 2030 target was set since 20% energy saving by 2020 still seemed possible as long as member states would apply the law which had already been approved. It was underlined in the directive that -through energy efficiency-, certain reduction in greenhouse gas emissions and enhancement in energy security would be achieved.

According to the communication titled as "Energy efficiency: Helping to reduce greenhouse gas emissions and improve energy security" (European Commission, 2014), between 2001 and 2011, industries' energy intensity was decreased about

19%, and energy consumption of new buildings was reduced by half compared to 1980s. Long term benefits of the legislation were listed in the following;

- 1% energy saving will result in 2.6% reduction in the EU's imported gas,
- energy efficient buildings will result in reduction in households energy costs,
- new business opportunities and jobs will arise thanks to energy efficiency.

Furthermore, the share of renewables in total primary energy consumption was intended to reach at least 27% until 2040.

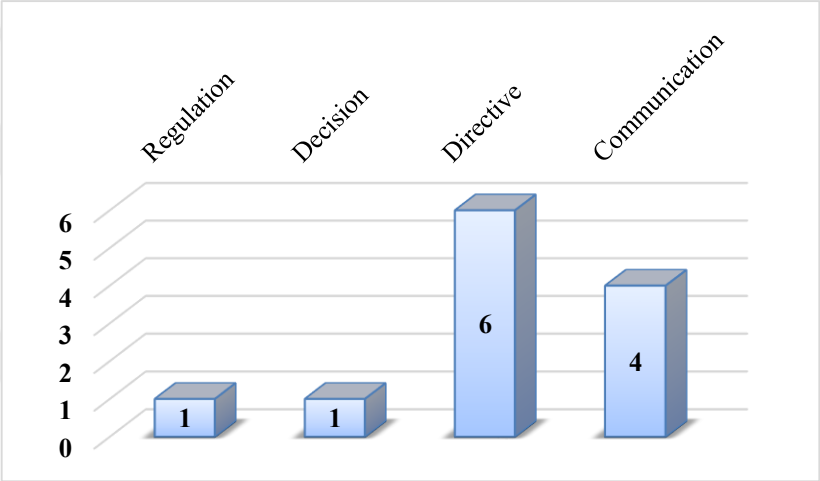


**Figure 1. Types of legislations on energy efficiency**
**Source: EUR-Lex; Summaries of EU Legislation; Energy**

In Figure 1, there are 8 binding and 4 non-binding papers. This can be interpreted that the decision making bodies, the Council and the Parliament, took firm actions in energy efficiency issue.

### 4.2. Legislations Regarding to European Energy Policy

The most apparent attempt to form a common energy policy is the Green Paper prepared in 1995, "For a European Union Energy Policy" (European Commission, 1995). The need to common energy policy was presented clearly:

> …An appropriate institutional framework in the energy field must be established taking into consideration the need to complete the internal

market and to respect the general principles of competition as well as the services of general economic interest…

Security of supply, energy efficiency and diversification of supply were also the necessary elements of the paper that were considered to be achieved.

In 2001, the Commission of the EU decided to organize an energy and transport forum. It would have a consultative committee and provide harmonization among energy and transport sector policies. The forum was held; nevertheless, a forum as such doesn't exist presently (European Commission, 2001).

Creation of an internal energy market has been at the top of the EU's energy policy agenda, and the necessity of its creation for better function of the common energy policy has been mentioned several times. In 2003, the Council passed a directive on framework for taxation of energy products and electricity. Along with this directive, the Union founded communal arrangements for the taxation of energy products and electricity. Its primary aim was to enhance functioning of the internal energy market through recuperating competition between energy products. Similar to previous legislatives, it was also driven by the desire to reduce imported energy and greenhouse gas emissions. The directive laid down minimum rates of taxation for each energy product and member states were prescribed to minimize the gap between national rates and the Community's minimum rates (Council of the EU, 2003).

Tackling with the climate change while arranging energy policies has been one of the targets of the Union since the adoption of the Kyoto Protocol in 2002. In accordance with the Protocol, the Parliament and the Council enacted a directive titled as "Greenhouse gas emission allowance trading scheme". The main aim was to reduce greenhouse gas emissions by 8%, in relation to 1990 levels, between 2008 and 2012, as well as eliminate their effect on climate change as much as possible. The parties of the Kyoto must redeem their commitments and the legislation was prepared for this. In this sense, on January 1, 2005, activities emitting greenhouse gas were subjected to specific limits. The Commission was asked to apply Union-wide procedures for the allocation of the emission allowances by the end of the 2010 and approve a regulation for emission monitoring and reporting by December 31, 2011. National governments were

nominated to submit their reports to ensure their application of the directive. Planned actions which would be carried out through at least 50% of the trade revenues were listed as (European Parliament and of the Council of the EU, 2003);

- extending the use of renewable energy while contributing to transition to low-carbon economy as well,
- increasing investments on energy efficiency and clean, eco-design technologies,
- decreasing deforestation while increasing reforestation.

Establishing greenhouse gas emission trading system has been one of the most significant activities of the EU; it would also help the Community to support economic development and employment.

The year 2007 can be assumed as important for the attempts to create common energy policy; on 10 January 2007, the European Commission prepared a communication titled as "An Energy Policy for Europe". Actually, calling it as a comprehensive energy package would be rather appropriate since many issues were addressed. The package was based on less consumption, more secure, more competitive and more sustainable energy. To achieve this, internal energy market and security of supply were seen as key drivers. A single energy policy would make the EU more strengthened in the international arena as the 27 countries were represented by a single voice. Threats to security of supply, increasing energy dependency on imported energy were mentioned as well. A common energy policy was demonstrated as the most effective way to deal with those issues. The vital importance of an internal energy market was highlighted once again; "interconnected European energy network" was cited as a key driver, too. The package also proposed the establishment of "Energy Customers' Charter" for financially inadequate citizens facing with rising energy prices. Emphasis was laid on security of supply many times. To improve it, diversification or diversifying energy supply and solidarity were regarded as considerably necessary. 20% emission reduction target was stated again; concordantly, energy's almost 80% share in all greenhouse gas emissions of the EU was mentioned. Energy efficiency and reducing energy consumption by 20% by 2020 was addressed. Renewable

energy resources have a significant impact on security of supply; therefore, increasing their share in energy mix by 20% by 2020 should be realized carefully. To accomplish this, investments on renewable energy sector should be increased by 50%. Nuclear energy was also mentioned in the package. The use of nuclear was left to the free will of member states as long as they fulfilled common security, safety and non-proliferation standards because nuclear has been one of the low-carbon energy resources, and its stable cost and supply nature is beneficial in terms of energy security. Lastly, the paper indicated that an international energy policy was required; the EU can be the driving force to actualize it (European Commission, 2007). However, making criticism is found acceptable here; a common energy policy at the Union level still has not been fully implemented, and yet, creation of an international energy policy does not seem feasible.

Attempts to create a common energy policy continued in 2008. A communication titled as "EU energy security and solidarity action plan" was prepared by the Commission. Accordingly, when preparing a common energy policy, essential role of the energy security and solidarity should be taken into consideration and the policy should be shaped around these two key terms. Hence, not surprisingly, the primary aim was to decrease energy consumption by at least 15% and to reduce imported energy amount by 26%. A new target was designated here; to replace all carbon emitting energies with renewable energies by 2050. Five main points were laid down around these targets;

- infrastructure needs and the diversification of energy supplies,
- external energy relations,
- oil and gas stocks and crisis response mechanisms,
- energy efficiency,
- making the best use of the EU's indigenous energy resources.

The study deduced that the EU was substantially driven by its ambition to reach 2020 targets. Increasing energy dependency worried the authorities. Briefly stated, in 2006, the share of imports in total oil consumption was 83.6%. 60.8% of

natural gas was covered by import, and import dependency[6] of all fuels was 53.8% (Eurostat, 2008). Moreover, the Union produced 46% of its total energy consumption at that time; this meant 54% of its consumption was imported. Therefore, they needed to be worried. External relations were considered as significant in terms of energy security and security of supply. Energy Community was a tool to ensure them and Ukraine, Moldova and Turkey should be included among the Community (European Commission, 2008).

In 2009, a regulation was laid down to improve energy efficiency by establishing European Energy Programme for Recovery which would financially support investments to energy sector. This financial support included mainly the components of internal energy market, infrastructure and productions of renewable energy resources. Safe and reliable network interconnection was needed for better functioning of the market. This fund was established on 13 July 2009. Energy security and diversification also mentioned 'the diversification of both energy sources and supplies'. Carbon capture and storage[7] would be supported by the programme as well in order to cope with climate change (European Parliament and of the Council of the EU, 2009).

A mechanism titled as "Effort Sharing Decision" was established by the Parliament and the Council decision in 2009. It would arrange binding emission targets for each member states for the years 2013-2020. The primary aim here was to contribute the Community's low-carbon economy target and to improve energy security (European Parliament and of the Council of the EU, 2009).

Another communication serving for low-carbon economy transition aim was "SET-Plan for the development of low-carbon technologies". Technology was regarded as key to this transition process. This set plan was called as "technology-pillar" of the EU's energy and climate policy. Similar to previous legislations, the paper referred to the aim of increasing the share of renewables, the significance of carbon capture and storage and energy efficiency. Additionally, the coordination

[6] Import dependency= Net imports / (Bunkers + Gross inland consumption)

[7] Carbon capture and storage: a way of mitigating climate change consisting of the capture of CO2 from industrial installations, its transport to a storage site and its injection into underground geological formations. Source: "European Energy Programme for Recovery" Regulation

between national research centres should be supported to enhance renewable energy technologies (European Commission, 2009).

The most significant legislation of the year 2009 was "2020 climate and energy package" (European Parliament and of the Council of the EU). In this directive, the EU officially declared its "20-20-20 targets". The aim here was to insure that the Union achieve its energy and climate targets by 2020. The package was based on three main purposes;

- reducing the Union's greenhouse gas emissions by 20 % from 1990 levels;
- improving the EU's energy efficiency by 20 % ; and,
- increasing the share of renewable energy (wind, solar, biomass, etc.) in total energy consumption by 20%.

Through these targets, the EU could combat climate change, increase its energy security, and make its competitiveness stronger. These could also serve for the Union's smart, sustainable and inclusive growth desire. There were significant points in this package. First, it revised the EU's emission trading system which included 45% of the Union's total greenhouse gas emission. The logic here was reducing the emissions of power sector and major industries by establishing a market price in line with cap and trade system[8]. Second, "Effort Sharing Decision" mechanism was established which covered industries like housing, transport, agriculture and gave members states annual emission reduction targets in proportion to their level of development. These limits were binding for all member states and they must put so much effort into meeting their targets and report their progress every year. Third, similar to emission reduction targets, all member states were obliged to meet their renewable energy targets given under the renewable energy directive. They must increase the use of renewables by 2020 in proportion to their wealth, i.e. 10% Malta, 49% Sweden. This could directly

[8] Cap and Trade: "A 'cap' is set on the total amount of certain greenhouse gases which could be emitted by the factories, power plants and other installations. The total emission falls while the cap is reduced in time. The system allows trading of emission allowances so that the total emissions of the installations and aircraft operators stay within the cap and the least cost measures can be taken up to reduce emissions." Source: 2020 Climate and Energy Package Directive.

contribute to greenhouse gas emission targets and decrease the Union's import dependency, in other words, enhance its energy security. Fourth, carbon capture and storage was another significant point of the package. It established a common legal framework for "environmentally safe use of carbon capture and storage technologies". It was capturing the carbon dioxide and storing it underground. It laid down the requirements of these storage sites. And last, energy efficiency target which would be applied in line with Energy Efficiency Plan 2011, and energy efficiency directive.

In 2010, "A strategy for competitive, sustainable and secure energy" communication came up with a new strategy to accelerate the achievement of 2020 targets. The strategy was built on progress already made and framed around 5 priorities (European Commission, 2010);

- to reach energy-efficient Europe,
- free movement of energy and its products; more integrated and competitive market must be achieved,
- secure, affordable and safe energy for all,
- supporting energy technologies and innovations,
- enhanced security of supply and energy efficiency.

Although the communication did not include our key words specifically, as the name implies, "Greenhouse gas: reducing emissions by 20% or more by 2020" was designated to achieve 2020 gas reduction target (European Commission, 2010). The 20% greenhouse gas emission reduction target was considered inadequate; global financial crisis that started in 2007 affected the Union as well and the desire to make its economy modernized and more competitive pushed the Commission to review the target. Costs to reach the target were decreased; in 2008, the annual estimation was €70 billion; however, by 2010, it was decreased to €48 billion. Thus, the target should be renewed to 30%. It was believed that the new target would encourage technological improvement and innovation, and this might raise the EU industries' competitiveness.

"Information on investment projects in energy infrastructure" regulation addressed security of supply, internal energy market and low-carbon economy. It

drew a framework for investments made in energy infrastructure. The covered segments were;

- petrol refining, transportation and storage,
- natural gas transmission, liquefied natural gas terminals and storage,
- electricity production and transmission,
- biofuel production,
- carbon dioxide transportation and storage.

Accordingly, member states would report their activities every two years. Commission would be responsible for analysing these reports and investment projects and discuss with European Network of Transmission System Operators (ENTSO) for electricity, ENTSO for gas, and Gas Coordination Group and Oil Supply Group. The reports would be presented to the Council, the Parliament and the Economic and Social Committee, and then, they could take an action since a new European energy infrastructure policy was needed to adopt to smoothly reach 2020 targets (Council of the EU, 2010).

In 2011, a new target was introduced in "Moving toward competitive, sustainable and secure energy for Europe" communication (European Commission, 2011). The Union undertook to reduce its greenhouse gas emissions by about 80-95%, below 1990 levels by 2050. Strategies and plans to reach 2020 targets had already been made. It was time to draw a new strategy for its new ambition; becoming a low-carbon economy and securing its energy. The member states must;

- fulfil 2020 targets completely,
- prior energy efficiency on the agenda,
- rise the share of renewable energy sources 30% by 2030,
- ensure that public and private investments contribute to the development low-carbon technology and energy,
- replace oil and coal with natural gas by 2030 because of its lower emission nature,
- determine energy prices according to actual costs,
- modernize energy infrastructure; storage was highlighted here; its contributions to energy security,

- enhance safety and security standards for traditional and new energy sources,
- wide their perspective to strengthen the Union's relation in international arena and contribute to the coordination of climate change actions.

Energy efficiency remained at the forefront of energy policy in 2013. Two recommendations were prepared: the first one, titled as "ICT – related recommendations to help the EU turn into a more energy-efficient, low carbon economy" (European Commission, 2013), asked the Information and Communication Technologies (ICT) sector to agree on common rules about the measurement of energy consumption and carbon emission, and validate a quantifiable and provable decrease in energy intensity[9] and carbon emission. Member states were advised to increase energy efficiency in cooperation with ICT sector because the sector has the key role to realize 2020 targets.

To support existing legislations, a new strategy was drawn from the second one, titled as "High performance, low-cost, low-carbon and sustainable energy" (European Commission, 2013). The aim was to strengthen the link between energy policy and technological innovation. The EU would lead technology and innovations having "low cost" and "low carbon" energy and economy matters for reaching 2020 targets and coping with possible challenges. Therefore, sustainable energy technologies were needed. Although the communication claimed that it laid down a new strategy, what it mooted was simply similar to previous legislations.

Later, a strategy plan was prepared; "Green Paper – A 2030 framework for climate and energy policies" (European Commission, 2013). Progress that had been made was expressed; emission reduction target was 20% by 2020, and in 2011, it was estimated 16% below 1990 levels; 20% share of renewable energy in total energy consumption by 2020, and it was 12.7% in 2010. Its share in transportation was 4.7%; despite the absence of bindingness of energy saving

[9] Energy intensity is one of the energy efficiency indicators defining the ratio between gross domestic product and value-added. Source: Republic of Turkey, Ministry of Energy and Natural Resources, http://www.enerji.gov.tr/en-US/Mainpage

target, total primary energy consumption was 1825 Mtoe in 2005 and it decreased to 1730 Mtoe in 2007.

A communication presented in 2014, again aspired to secure energy supply. The term, "supply security" was seen for the first time. Improving the supply security and reducing dependency on energy imports were the primary aims. According to Eurostat, 91.1% of petroleum supply, and 65.3% of natural gas supply and 44.2% of coal supply were covered by imports in 2013. Communication titled as "A stable and abundant energy supply for EU" demonstrated an 8-point strategy (European Commission);

- an urgent action plan should be established to prevent possible energy disruption in 2014-2015 winter,
- emergency solidarity mechanisms between member states should be strengthened,
- decreasing energy demand by increasing energy efficiency
- efficient and integrated energy market should be ensured,
- increasing the production of indigenous energy resources,
- developing energy technologies which decrease energy demand, support diversification and strengthen security of supply,
- diversifying external energy supply and infrastructure obtaining it,
- strengthening the coordination between national energy policies and communication on external energy relations.

Communication titled as "A policy framework for climate change and energy 2020 to 2030" was published following the Green Paper (European Commission, 2014). It was based on the progress made through 20-20-20 targets. The aims of the communication were;

- 40% greenhouse gas emission reduction by 2030 (does not have binding status),
- ETS reformation; a new market stability reserve as well as tightening the annual cap on emissions after 2020,
- enhanced energy efficiency, security of energy supply and competitiveness, similar to 2020 targets,

- a new European governance system for the delivery of energy climate objectives was proposed; member states would be obligated to prepare their own action plans to reach secure, competitive and sustainable energy and their plans would be revised and evaluated by the Commission, and
- in order to control attempts on competitive, secure and sustainable energy, indicators were needed to be established.

Consumer protection came into prominence in "Energy prices and costs in Europe" communication. The Commission desired to protect households while steering the energy policies. Proposals were presented about how to control energy prices and households' energy costs while addressing energy efficiency, internal energy market, and 2020 climate and energy targets (European Commission, 2014);

- member states should contribute to the completion of internal energy market,
- both households and industries should investigate cheaper energy suppliers to lower their energy bills,
- measures to achieve energy efficiency should be increased,
- European energy infrastructure should be established
- energy supplies and infrastructure that meet these supplies should be diversified, and to achieve this, the EU should be represented by a single voice.

Subsequent to several communications, the Council applied a resolution titled as "Public and private partnership for hydrogen and fuel cells". The aim was to accelerate the installation and development of fuel cell and hydrogen technologies; they would prevent the Union from possible challenges. The use of renewable energy must be extended, and this could lead to reduce import dependency and carbon emissions. The process could create new business areas and contribute to employment and economic development (Council of the EU, 2014).

The last legislation of 2014 was a regulation; "Sharing information on energy infrastructure investment projects in EU". Accordingly, member states must inform the EU on energy investments to prevent any possible challenges against security of supply. Their capacity, type of energy resources that are used, mechanisms to respond security of supply problems, and carbon capture and storage mechanisms to cope with climate change must be ascertained (European Parliament and of the Council of the EU, 2014).

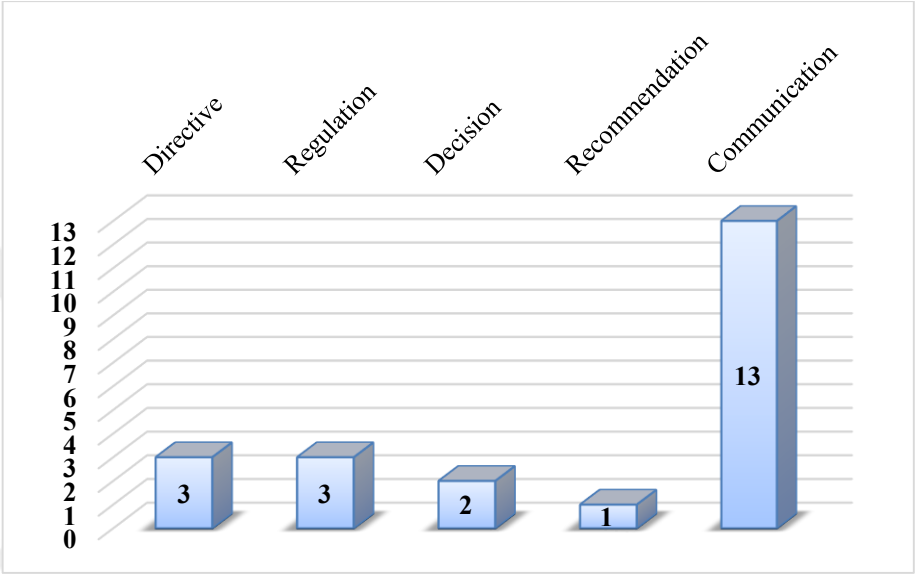


**Figure 2.Types of legislations on European energy policy**
**Source: EUR-Lex; Summaries of EU Legislation; Energy**

Figure 2 has 8 binding, 14 non-binding documents. Considering the effort to establish a common energy policy, which still continues today, that is not a surprising result.

### 4.3. Legislations Regarding to Internal Energy Market

"Internal energy market" and "security of supply" terms were clearly used in the directive, "Prospection, exploration and production of hydrocarbons" in 1994. Rules on prospection, exploration, and production of hydrocarbons were laid down. These rules aimed at supporting the creation of internal energy market, encouraging the competition and enhancing security of supply. Accordingly, every single member state has the sovereign right to perform hydrocarbon activities in their territories. Yet, to establish internal energy market and strengthen security of supply, non-discriminatory common rules must be created.

The territories of the member states must be open to actors of other countries. Each member states must inform the EU on areas open for use, the permissions that are granted, actors carrying out these activities and their reserves annually (European Parliament and of the Council of the EU, 1994).

In 2006, security of supply and internal energy market emphasis similarly continued. The significance of efficient energy infrastructure in functioning of internal energy market was subjected to the communication, "Priority Interconnection Plan (PIP)". The infrastructure also matters for the achievement of the Union's sustainable development, competitiveness and secure energy supply targets. Trans European gas and electricity network was required to be established (European Commission, 2006).

"Green Paper - Towards a secure, sustainable and competitive European energy network" was published by the Commission in 2008. As is evident from its name, the paper proposed to transform European energy networks in compliance with strategy in "Energy Policy for Europe" the communication, published in 2007. Because the Union, as well as energy market, were dependent on imported energy, new routes and suppliers needed to be found, such as Central Asia, the Caspian Sea, the Middle East or Africa. These new routes should be established in the next 10 years urgently. All member states should be integrated into internal energy market; therefore, energy network development needed to be the central issue in energy policy making. European energy networks should be updated by using modern technology. In order to enhance security of supply, east-west and north-south connection should be established (European Commission, 2008).

The directive, "Transparency of gas and electricity prices" also applied in 2008. Competition is a must for a common market, then, prices must be transparent to ensure it. The directive established a Union-wide procedure for the prices. The procedure also would give consumers (both households and industries) the right to choose their suppliers (European Parliament and of the Council of the EU, 2008).

2009 was a productive year for internal energy market policy. Three regulations and two directives were applied. "Agency for the Cooperation of Energy Regulators (ACER)" was prepared to make the market function better. The regulation set up a namesake body which regulators in the member states transfer

their authorities and duties into. The Agency's responsibilities were (European Parliament and of the Council of the EU, 2009);

- creating and publishing opinions,
- monitoring electricity and gas market activities, and
- encouraging cooperation and communication between member states' energy regulators.

Regulation titled as "Cross-border exchanges in electricity" set rules for cross-border electricity exchange. It supported cooperation and harmonization in the market. The ENTSO for electricity was established. It has been responsible for giving permission for trade activities, and managing cross-border electricity supply. Procedures related to ENTSO are (European Parliament and of the Council of the EU, 2009);

- network security and reliability;
- data interexchange;
- technical and operational exchanges;
- transparency rules;
- harmonised transmission tariff structures;
- energy efficiency.

The directive, "Internal market in electricity" made amendment on some rules and measures to ensure fair competition and consumer protection. It laid down common rules for electricity generation, transmission, distribution and supply, ensuring the establishment of a competitive, secure and sustainable electricity market. Different from previous legislations, electricity market was examined in detail; different set of rules were introduced for each of the electricity activities. Member states would have to establish independent regulatory authorities (European Parliament and of the Council of the EU, 2009).

Gas market was addressed in a separate directive titled as "Internal Market in Gas". Accordingly, lack of transparency suffered the internal market. This directive laid down common rules for transmission, distribution and storage of natural gas. Activities of liquefied natural gas, biogas and biomass were addressed as well. Ensuring a competitive, secure and sustainable natural gas market was the

main purpose. Member states must guarantee their consumers can easily choose and change their suppliers. National governments were responsible for monitoring security of supply, controlling balance between supply and demand, and checking the operation of network. Regional and international cooperation should be supported to ensure the security of supply. Member states must work in tandem with ACER. Similar to electricity market directive, transmission, distribution and supply activities were attached particular importance and rules were established one by one (European Parliament and of the Council of the EU, 2009).

There were still obstacles in internal gas market according to the regulation, "Natural gas transmission networks". To remove these obstacles, rules on transmission, storage and liquefied natural gas facilities were laid down. ENTSO for gas was established and assigned with ACER to work on following issues, prepare non-binding framework and send it to Commission (European Parliament and of the Council of the EU, 2009);

- network security and reliability,
- data interchange,
- technical and operational exchanges,
- transparency rules,
- harmonised transmission tariff structures,
- energy efficiency.

To encourage consumers to do something about energy consumption, communication, "Smart Grids[10]" was published in 2011. The aim here was to provide consumers to take control of their energy consumption. This could contribute the EU's 20% emission and energy consumption reduction targets (European Commission, 2011).

In order to monitor wholesale energy markets[11], regulation titled as "Wholesale electricity and gas markets – EU oversight rules" was laid down. The primary

[10] Smart Grid is a smart electricity network having intelligent monitoring and metering systems which enables suppliers and consumers communicate with each other. Source: Smart Grids Communication

[11] Wholesale energy markets are where energy is traded between energy retailers, investment banks and large energy users. Source: Wholesale electricity and gas markets — EU oversight rules Regulation

purpose was to avoid "market manipulation and insider trading[12]". The position of ACER was strengthened and new tasks were assigned;

- monitoring trading activities in the wholesale energy market,
- sending an annual activity report to the European Commission on,
- recommendations on how to better implement market rules to improve transparency and integrity,
- an evaluation of whether minimum requirements for organised markets could increase transparency.

The regulation established responsibilities for market participants as well;

- registering with a national regulatory authority (NRA),
- providing ACER and the NRA with information, so both bodies can monitor trading activities,
- publicly disclosing inside information in a timely manner, including that related to the capacity and utilisation of facilities, production, storage, consumption and transmission of electricity, natural gas or liquefied natural gas.

Furthermore, penalties must be applied by member states in the following situations;

- weightiness of the violation,
- harms given to consumers,
- gaining information from inside and market manipulation.

However, there is no explanation about what kind of penalty and how it will be applied (European Parliament and the Council of the EU, 2011).

In 2013, infrastructure works were given priority, and 2 regulations were applied. First one was "Connecting Europe Facility" which would establish a namesake facility laying down conditions, methods and procedures for investments in energy, transport and telecommunication sectors. It was also expected that this

[12] Market manipulation is hindering the lawful operation of a market. Insider trading is benefitting from trade through non-public or private information. Source: Wholesale electricity and gas markets — EU oversight rules Regulation

could support economic growth and strengthen the EU's single market. It could contribute the Union's 2020 targets; mainly 20% reduce in greenhouse gas emissions, 20% increase in energy efficiency and share of renewables in total energy consumption (European Parliament and Council of the EU, 2013).

Second, "Guidelines for Trans-European energy infrastructure" was considered energy infrastructure as the prominent verge of the EU's 2020 targets. The regulation laid down the guidelines for establishing trans-European infrastructure. As understood, in 2013, trans-European network had not yet been completed. Amendments were made on 2006 and 2009 regulations. It centred the energy infrastructure at the heart of the 2020 targets. Member states agreed on following issues in 2011 (European Parliament and Council of the EU, 2013);

- modernizing and expanding Community's energy infrastructure,
- interconnecting the networks across borders,
- providing alternative supply or transit routes,
- diversifying energy sources, especially renewables must be included,
- all EU countries must be interconnected to European electricity and gas networks by 2015, and no member states' energy security must suffer from lack of accurate connections.

The regulation established 12 separate regional groups and 248 projects which would be applied to these regions were adopted by the Commission. Projects must be beneficial for minimum 20 member states; contribute to integration of internal energy market and competition; enhance security of supply and reduce $CO_2$ emissions. These projects would be renewed every 2 years and member states should implement them immediately because they would be closely and carefully watched and assessed.

In 2014, a regulation was established on an unprecedented issue. According to the legislation titled as "Public contracts-setting out clear ground rules", national authorities must treat companies and individuals equally, act through non-discrimination principle, and must be transparent while lodging a tender and contracting. Contracts must be made with the one who gives economically the most advantageous offer. These procedures must be suited to international, European and national environmental, social and labour essentialness, standards

and agreements. Small companies must also be ensured to participate in the market activities; a new procedure was applied to support innovative products, services and works (European Parliament and Council of the EU, 2014).

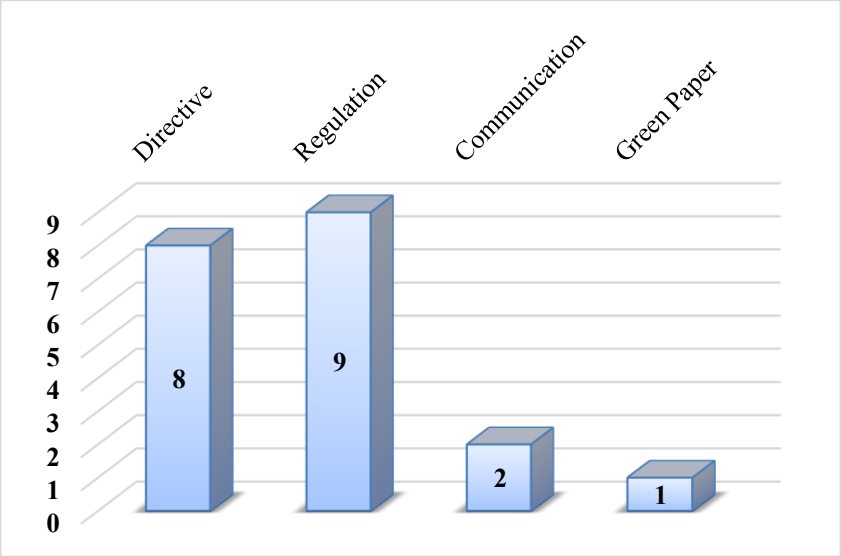


**Figure 3.Types of legislations on internal energy market**
**Source: EUR-Lex; Summaries of EU Legislation; Energy**

Figure 3 has 17 binding papers out of 21. By taking into account the other figures, it can be said that the figure demonstrates decisiveness.

### 4.4. Legislations Regarding to Nuclear Energy

Policies on nuclear energy initiated the creation of EURATOM through Treaty of Rome in 1957, and progressed over the years step by step.

In 1957, the Original Six aimed at coordinating the peaceful use of nuclear energy and signed the Treaty of Rome. They saw nuclear energy as a means to ensure energy independence. Accordingly, we can say that external independence was seen as an axe to grind even at that time. The EURATOM would contribute to the establishment and improvement of nuclear industries and security of supply in member states as well. The primary duties of the EURATOM were (ECSC, 1957);

- promoting research and ensuring the dissemination of technical information,
- establishing community-wide safety standards to protect the health of workers and of the general public and ensure that they were applied,

- facilitating investment and ensuring the establishment of the basic installations which were necessary for the development of nuclear energy in the Community,
- ensuring that all users in the EU received a regular and equitable supply of ores and nuclear fuels,
- making certain that civil nuclear materials were not diverted to other purposes, especially military,
- exercise the right of ownership conferred upon it with respect to special fissile materials,
- fostering progress in the peaceful uses of nuclear energy by working with other countries and international organisations,
- establishing joint undertakings.

The establishment of the Single Market in 1993 abolished the trade barriers and custom controls, harmonized national laws and enabled companies to trade across borders. Then, the need to devising the shipment of radioactive substances occurred. Regulation, "Shipments of radioactive substances" laid down a Union-wide framework for shipments of radioactive substances between member states. Actors who are shipping must procure a prior declaration by the receiver. The activity must also be appropriate for national laws (Council of the EU, 1993).

In 1996, a directive was applied by the Council to form a framework for safety standards, protecting the health of labourers and the public against radiation dangers. The directive involved practices of ionizing radiation either from an artificial source or a natural source. Accordingly, member states must (Council of the EU, 1996);

- report their practices,
- acquire authorization obtained for practices of ionizing radiation,
- inform about recycling or reusing of radioactive substances or materials having radioactive substances,
- ensure their activities comply with their economic, social or other type of benefits,

- prohibit use of radioactive substances in foodstuff, toys and cosmetics production,
- employ workers who are above the age of 18,
- ensure emergency action plans were prepared at national or local level,
- accept any emergency situation that can affect outside their territory.

A Commission decision in 1999 referred to accession of the EURATOM to the Convention on Nuclear Safety which belongs to the International Atomic Energy Community of the United Nations. The Convention is an international framework aiming at improving nuclear safety all over the world. Because the EU is one of its parties, so are its member states. The EURATOM shares realm of authority with the Convention. The Convention's main purposes are (European Commission, 1999);

- to achieve and maintain a high level of nuclear safety through the enhancement of national measures and technical cooperation,
- to establish and maintain effective measures against radiological hazards in nuclear installations in order to protect people and the environment,
- to prevent nuclear accidents and limit their results/costs.

Council directive, "Radiation – preventing exposure from sealed sources" introduced rules on "sealed radioactive sources[13]" in 2013. If these sources are vanished, misdirected or unrestrained, they become orphan sources. The orphan sources are danger to health. The directive here aims at decreasing this danger. Owners from member states must record their location of the sources, transfer details and identification markings. Besides, they must (Council of the EU, 2003);

- control sources regularly,
- run tests in conformity with international standards,
- inform authorities if anyone is exposed to radiation,
- avoid illegal use,
- arrange radiation protection training for labourers.

[13] Sealed radioactive sources are small amounts of radioactive material permanently sealed in a capsule or bonded to a non-radioactive material. Source: Council Directive, Radiation – preventing exposure from sealed sources.

Similar to 1993, the Council established a directive in 2006 but a more extensive one; "Radioactive waste shipments – supervision and control". The directive gives permission to member states on shipment of spent fuels for reprocessing activity. However, the shipment activity between or through European states must have prior authorisation. If any shipment violates this directive, it must be forced to turn back home country. Both owner and receiving countries must inform each other during the process (Council of the EU, 2006).

In 2007, the focus was still on safety principles. The council decision was accepted the EURATOM's accession to the Physical Protection of Nuclear Material and Nuclear Facilities. The purpose of the Convention was to guarantee the protection of nuclear materials and to use them for peaceful purposes. Each of the member states is responsible for founding and applying procedures to ensure this protection. They must avoid any use out of purpose and respect principles of security, insurance and confidentiality. Insurance must be granted during import, export activities. Each member state must form a body to perform the application of the Convention. These bodies must cooperate with each other and inform International Atomic Energy Agency (IAEA). Contracting parties also have the right to inflict punishment on violators (Council of the EU, 2007).

To supplement the ITER[14], the EU and Japan signed an agreement which founds a basis for research and development activities on fusion energy projects. The Council decision, "ITER – EURATOM – Japan agreement on nuclear fusion" presents the application of the 10 year-agreement. Activities refer to research projects developed in Japan; International Fusion Materials Irradiation Facility testing and qualifying materials in environment comparable to those of a fusion power reactor; Tokamak programme developing operating scenarios for ITER; and International Fusion Energy Research Centre (Council of the EU, 2007).

The Council decision on establishing collaboration between ITER and the EU was applied in the same year. "The EU's joint undertaking fusion for energy" applied a 35 year-agreement. Its contracting parties are EURATOM, represented by the Commission, 28 member states and Switzerland. The purpose of this agreement is

[14] ITER is a large scale international experiment which was set up for providing viability of nuclear fusion as an energy source. Source: Council Decision "The EU's joint undertaking fusion for energy".

to insure EURATOM's addition to ITER and support cooperation with Japan on rapid realisation of fusion energy. The primary duties of this joint undertaking are (Council of the EU, 2007);

- to manage the preparation of the site for the ITER project,
- to provide the ITER organisation with material, financial and human resources,
- to organize scientific and technological research and development activities in the field of fusion,
- to perform as an interface with the ITER organization.

On October 4, 2007, the Commission published a communication representing the status of nuclear sector in the EU, and the world as well. Accordingly, the EU was the largest producer of nuclear electricity in 2005. About one-third of electricity and 15% of total energy consumption was produced from nuclear power plants. At that time, the world had 443 nuclear reactors, providing 15% of world's electricity, while the EU had 152 reactors. The advantages of nuclear power are diversifying the energy supply, security of energy supply and less carbon. Although their construction costs are higher, their operating costs are lower than the ones which use fossil fuels as the costs of fossil fuels often fluctuate. Thanks to its low carbon emission nature, it contributes to coping with climate change. Nuclear power would be safer through applying safety security standards, and laws which were laid down by the EU. Because most of the power plants were about 25 years old and the average lifespan of a nuclear power plant is 40 years, there was a need to construct new ones (European Commission, 2007).

A namesake council decision in 2008 established EURATOM Supply Agency. The Agency was established for administering a regular and equitable supply of ores, source materials and special fissile materials. It has the right over all materials produced within the EU territory. It must act through common supply policy. Its responsibilities are (Council of the EU, 2008);

- providing expertise, information and advice on nuclear market,
- monitoring trends of the market that could affect security of supply.

In 2009, communication titled as "Nuclear non-proliferation" was issued considering the risks of the nuclear energy and potential danger it could generate. The paper rearranged the Union's concern over nuclear energy and proposed to enhance and consolidate measures on nuclear non-proliferation. Thanks to its advantages and benefits, nuclear has been attracting attention worldwide. Growing interest in direct proportion to number of facilities poses threat. IAEA supports the use of nuclear for peaceful activities. EURATOM should support the Agency to fight against its use outside of that. The common foreign and security policy (CFSP) is the main tool of the EU to promote nuclear non-proliferation. The Union also developed other instruments to contribute non-proliferation strategies in non-EU states (European Commission, 2009);

- the Instrument for Stability; to help these countries to prevent risks related to chemical, biological and nuclear materials,
- the Instrument for Pre-Accession Assistance; financial and technical help to support reforms in the enlargement countries,
- the Instrument for Nuclear Safety Cooperation; to contribute to development of nuclear safety levels and efficient and effective nuclear circumspections.

Another directive in 2009 was also about safety standards. The aim was ensuring the safety of nuclear installations, protecting the citizens, public and workers from danger they posed. There was an ambitious and detailed framework created to prevent any accident in the European territory. Obligations of the member states given by this framework were (Council of the EU, 2009);

- to implement national framework on the safety of nuclear installations,
- to create an independent national security authority that in charge for administering nuclear power operators activities,
- to implement a safety assessment before building a nuclear facility and to re-examine safety of installations at least every 10 years,
- to make sure public is able to get transparent information on nuclear installations, both during normal operation and in emergency,
- to have self-assessments of their own framework and regulatory authorities every 10 years,

- to appeal an examination on safety issues, to be implemented by safety authorities in EU countries every 6 years,
- to plan a structure through their national frameworks to organize in case of emergency.

After Fukushima accident had happened, the number of legislations on nuclear power was increased. Not surprisingly, it led to a global debate on its safety measures, and became a controversial issue in the EU as well because the share of nuclear was 13% in gross inland consumption, and 27.4% in gross electricity generation of the EU-27 in 2010 (European Commission, 2012). Although its share had increased between 1990 and 2005, the closure of nuclear power plants (NPP) started to decrease it after 2005. And recently, the accident resulted in the closure of 8 NPPs in Germany (European Environment Agency, 2015). This accident reminded the significance of expertise, waste management and decommissioning of power plants. A communication, "Education and training in the nuclear energy field", was prepared to prevent nuclear accidents. The situation at that time showed that the number of students and graduates in nuclear science was insufficient; nuclear sector did not catch attention of graduates; and the training of the employees was not guaranteed to continue. According to the Commission, it was necessary to enhance nuclear science in universities and its technology. The European Nuclear Education Network Association had a significant role here; it should coordinate the flow of information among universities and research centres. And it was planned to establish new incentives to encourage new graduates to work in nuclear sector (European Commission, 2011).

European system for registration of carriers of radioactive materials was suggested in the namesake proposal. It is not important whether the materials are transported from an EU country, from a non-EU country to EU country, or passed through an EU country; by air or maritime transportation, all the information has to be entered on to the Electronic System for Carrier Registration by carriers. Member states should establish an independent authority and national contact for this activity. Carriers of fissile materials and high consequence radioactive materials should be obliged to take permission from these authorities, and if they would not, they should be tried (European Commission, 2011).

As stated above, waste management became more significant after Fukushima. The Council applied a directive, "Radioactive waste and spent fuel safety rules", similar to the one in 2006 but with one exception; it was more detailed. A framework was established on safe management of spent fuel and radioactive waste. Accordingly, member states must redesign their national policies in line with following principles;

- the amounts generated must be kept as low as possible,
- all steps in generation and management must be mutually dependent,
- priority should be safety,
- generators must accept the expense of all security necessities, and,
- the process of decision making must be recorded.

The member states were called to manage their own radioactive waste and spent fuel. They must establish and apply their national legislations which include a management programme, safety measures, licencing activities, information for public and financing. Independent regulatory authorities must be established in each member states to ensure better function (Council of the EU, 2011).

Concerns on nuclear were continued in 2013. The directive, "Dangers arising from ionising radiation" was prepared by the Council aiming at preventing the danger of exposure to ionising radiation. Accordingly, it was estimated that it did not have a direct impact on health; however, it could cause cancer in the long term. To protect the health of workers, public and patience, basic safety standards could be established by national governments if they wanted; nevertheless, they would have to inform people living within 50 kms of a nuclear power plant about the risks and health protection precautions. The directive also established measures on disposal of radioactive materials and the storage of them (Council of the EU, 2013).

Similar to the directive above, the Council applied another directive titled as "Setting basic safety standards for exposure to ionising radiation". This time, it set out measures on how to ensure safety and security of radioactive material and information which must be delivered in emergency time. It was applied to planned, existing or emergency situations that might contain risk of ionising radiation. It was applied;

- the manufacture, production, processing, handling, disposal, use, storage, holding, transport, import to and export from the EU of radioactive material,
- the manufacture and operation of electrical equipment which emits ionising radiation,
- human activities with natural radiation sources which may result in a significant rise in the exposure of employees or the public,
- domestic exposure to radon gas in indoor air and external exposure to gamma radiation from building materials,
- managing emergency exposure situations which necessitate measures to protect the public and workers.

Similar to previous Council directive, to protect the pregnant, students and employees, a provision was made. Moreover, radiation is also used for medical purposes; patients must be informed of the risks and benefits of this type of medical treatments (Council of the EU, 2013).

Different from previous legislations, there are two Council regulations prepared and applied for two member states. First one is "Nuclear reactors in Bulgaria and Slovakia – EU decommissioning aid" (Council of the EU, 2013). During negotiations, the EU asked Slovakia and Bulgaria to close the nuclear power plants that were similar to Chernobyl, which meant the power plants posed threat. Member states agreed on compensating their decommissioning costs; €293,032,000 for the Kozloduy nuclear power plant in Bulgaria and €225,410,000 for the Bohunice nuclear power plant in Slovakia. Second one is "Nuclear Reactors in Lithuania – EU decommissioning aid" (Council of the EU, 2013). Lithuania was also demanded to shut down its Ignalina nuclear power plant because it was similar to Chernobyl during negotiations. The EU decided to help for decommissioning activity; €450,818,000 aid would be contributed.

In 2014, member states agreed on establishing a framework for nuclear safety and cooperation with third countries. A Council regulation, "Financial cooperation with non-EU countries on nuclear safety" was laid down. The aims here were;

- to support the European attitude on highest safety standards to enhance the security of nuclear power plants in non-EU countries,
- to remove risks to public and life and sustain development with education and expertise sharing,
- to collaborate with regulators responsible for safety in order to guarantee their technical capability and freedom, and also to empower rules on nuclear safety.

The regulation is open to all countries; however, negotiating states, neighbours on borders and parties of 1994 Convention on Nuclear Safety are privileged. These targets will be implemented through annual national action plans. The EU will use foreign policy as an instrument on cooperation with states aforementioned (Council of the EU, 2014).

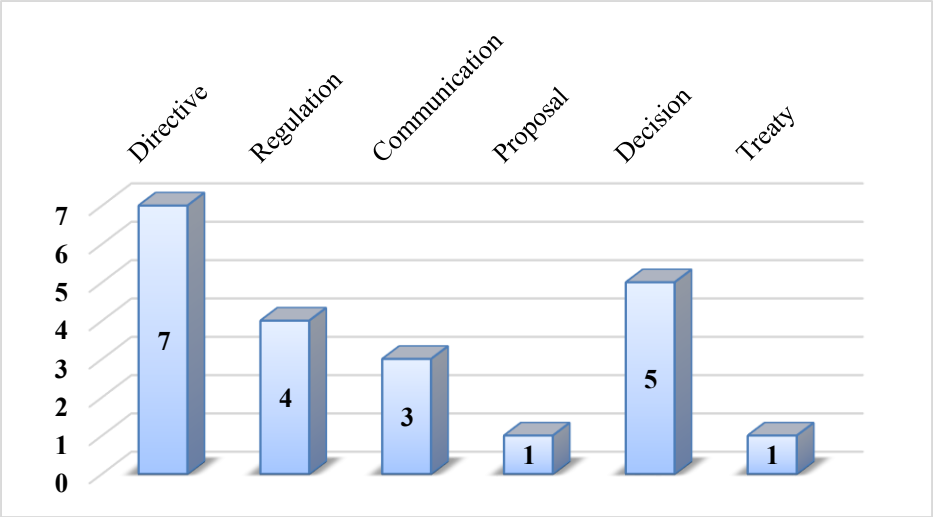


**Figure 4.Types of legislations on nuclear energy**

**Source: EUR-Lex; Summaries of EU Legislation; Energy**

Figure 4 has 17 binding documents out of 22. Similar to internal market issue, the decision makers demonstrate decisiveness as well on nuclear energy issue.

### 4.5. Legislations Regarding to Renewable Energy

Legislations under the title, 'Renewable Energy' begins with "Encouraging the use of biomass as an alternative source of energy" published in 2005. According to the communication, the use of biomass could contribute the fight against climate change through reducing greenhouse gas emissions. It can help the EU to

diversify its energy supply. Biomass can be used in electricity generation, heating and transportation as fuel (European Commission, 2005).

In another communication of 2005, "Support for electricity from renewable energy sources", the latest situation of the renewables was analysed (European Commission, 2005). Public support was seen as significant for developing policies between member states. However, political harmonisation was insufficient at that time. As mentioned before several times, the EU committed itself to increase the share of renewables by 20% by 2020 and communication papers set strategies to achieve the target, yet no binding legislation was found to achieve it. Accordingly, existing supporting mechanisms were;

- feed-in tariff,
- the green certificate system,
- tendering systems,
- tax incentives.

Energy resources that draw on these support mechanisms were;

- wind energy; feed in tariff, most effective in Germany, Spain and Netherlands,
- biogas forestry; mostly used in Denmark,
- hydroelectricity and photovoltaic solar energy; especially used in Germany.

There are also other types of renewable energies, such as tidal, geothermal, wave and solar thermal, benefitting from supports; however, they have not been industrially developed. National governments must ensure that their citizens are informed that these mechanisms affect them. Through increase in harmonisation, the integration of renewables into the internal energy market would lead more competition. Moreover, more than one authority, whether local, regional or national, leads to lack of coordination. A single authority needs to be established. Member states must ensure that projects on renewable energy comply with European environmental legislations.

In 2006, the Commission suggested a thematic programme for the sustainable management of natural resources and environment under the communication, "Environment and sustainable management of natural resources, including energy", a thematic programme that could complete measures on environment and natural resources, including energy, under national and regional frameworks. The priorities of the programme were (European Commission, 2006);

- trying to achieve integration of the sustainable environment measures in developing countries,
- supporting application of initiatives and promises at international level in the areas of climate change, sustainable development, marine resources, biodiversity,
- developing integration especially concerning fighting against poverty through extending the responsibilities of the EU and cooperation and aids,
- enhancing international governance regarding the environment mainly by supporting regional and international environmental monitoring and assessment, help for implementation of international environmental agreements,
- supporting choices for renewable energy through institutional support and technical assistance.

In 2008, as the name indicates, "Promotion of offshore wind energy" was published for promoting wind energy, especially maritime was referred to here. It was seen as a significant resource to contribute to the new energy policy of the EU. Offshore wind energy is both clean and indigenous, helping to enhance security of supply, decrease greenhouse gas emissions and increase competitiveness. These are main objectives of the new energy policy, too. Maritime wind energy is more beneficial than on land in terms of;

- larger production units,
- stronger and more stable winds,
- less neighbour concern.

Its capacity could be increased by 30 or 40% by 2020; but clear legislation and political framework was needed. There was absence of electrical transmission systems whose development was seen as a must. Technological need would be met by the European Strategic Energy Technology Plan which was also adopted in 2008 (European Commission, 2008).

In 2009, at least, a directive was laid down titled as "Promotion of the use of energy from renewable sources". Accordingly, the directive was significant to increase the use of renewable, control energy consumption, and combatting climate change. A common framework was applied to promote renewable energy resources while aiming at reducing greenhouse gas emissions as well. Increasing the share of renewables in total energy consumption by 20% by 2020 became binding on member states. Key points were (European Parliament and Council of the EU, 2009);

- each member states must draw their own action plans including the share of renewables,
- they must think cost-effectively; producing electricity from renewables can be cheaper in other states, exchange is possible,
- they must assure the use of renewables in electricity generation, heating, cooling and transportation,
- they must develop relevant infrastructure,
- biogas and biofuel must be maintained without using raw materials.

In 2015, the communication, "Greater interconnection of Europe's electricity system" was presented. Interconnected EU-wide grid could help the Union to achieve affordable, secure and sustainable energy and create business and enhance growth. One of the EU's 2020 targets is 10% electricity interconnection. 10% electricity interconnection means at least 10% electricity, produced to be transported to neighbouring EU countries. This paper aimed at achieving it. Its advantages are;

- security of supply,
- lower prices in internal market,
- sustainable development and decarbonising the energy mix.

The paper gave 12 least interconnected states' percentage; Ireland 9%, Italy 7%, Romania 7%, Portugal 7%, the UK 6%, Estonia 4%, Latvia 4%, Lithuania 4%, Spain 3%, Poland 2%, Cyprus 0%, and Malta 0%. The tool to reach the target was "projects of common interest" on infrastructure, and the Commission would prepare annual reports on the application of these projects on the progress to reach 10% target. Member states could benefit from European Structural and Investment Fund, European Fund for Strategic Investment and Connecting Europe Facility to implement these projects (European Commission, 2015).

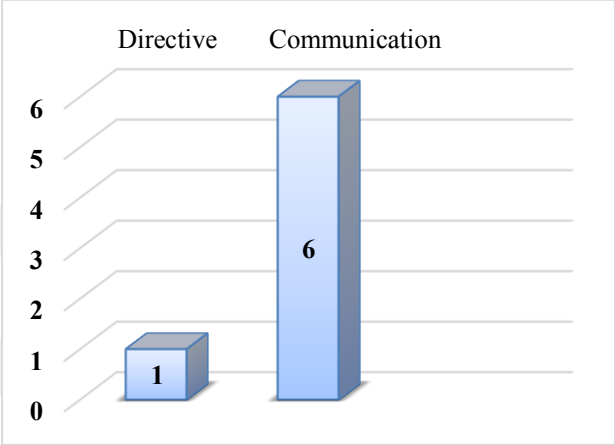


**Figure 5.Types of legislations on renewable energy**
**Source: EUR-Lex; Summaries of EU Legislation; Energy**

The result displayed in Figure 5 is surprising; renewables have 2 bindings out of 7 documents. This may be the result of the member states' right to use their own energy resources at will.

### 4.6. Legislations Regarding to Security of Supply, External Dimension and Enlargement

In 1998, the Council and the Commission published a decision on "European Energy Charter". Energy Charter Treaty founded cooperation between the EU members and other developed countries aiming at cultivating the energy potential of Eastern and Western European countries and ensuring security of energy supply. As a matter of fact, the main aim here was to secure energy supply of the EU. Although the Energy Charter Treaty and Energy Charter Protocol on energy efficiency and environment were signed on December 17, 1994 in Lisbon, they entered into force in 1998. There were 51 countries and the treaty became binding on signatories. The main points were;

- investment protection,
- energy materials and products trade,
- transit and dispute settlement.

All signatories must assume the necessities. Accordingly, signatories;

- must contribute to better functioning of the market,
- must ensure transparency; providing any information on legislations, energy, products and materials is a must,
- have sovereignty over their own natural resources,
- are not subjected to any taxation framework; their own rules are in use,
- must respect to environment and minimize their harm on environment while making operations on their own energy resources.

The objectives of Energy Charter Protocol were;

- to support energy efficiency measures contributing to sustainable development,
- to ensure that investors and consumers would be able to use energy in a more efficient, economic and environmental way,
- to promote collaborations on energy efficiency.

Signatory countries committed themselves to form policies on energy efficiency and measures supporting functioning of the market (European Commission and Council of the EU, 1998).

Increasing energy dependency, as a result of global fossil fuel trend, lack of indigenous resources and fossil fuel resources, has always preoccupied the decision makers in the EU. In 2000, consequently, the Commission published "Green Paper on the security of energy supply" to address the primary points regarding energy dependency, the role of renewable energy and nuclear energy, internal energy market and climate change. Besides, the impact of non-consensual common energy policy on the situation was also emphasized. Although the EU had power to interfere in internal market, environment and harmonisation areas, the absence of a common energy policy has been affecting the Union adversely.

According to the data at that time, 50% of the EU's energy needs was met by imported energy, and it had potential to rise to 70% by 2020 or 2030 if nothing was done. 45% of oil was imported from the Middle East and 40% natural gas from Russia. To tackle with the dependency, the Commission proposed a solution. However, climate change and internal market should be taken into consideration while preparing a strategy. Ensuring the security of consumers by providing energy products at an affordable price while being concerned about the environment and sustainable development should be the main objective of an energy strategy. Energy types in use were another point of concern. The points of the solution were (European Commission, 2000);

- rebalancing the Union's supply by taking explicit actions on behalf of a demand policy; the growth in demand should be managed and supply should be diversified concerning global warming, i.e. supporting renewable energy,
- the role of nuclear in securing energy demand and sustainable development should be taken into account while maintaining nuclear safety and waste management,
- establishing a mechanism for founding stocks and securing new routes for rising imported oil and gas.

In 2002, the Commission published a communication, "Energy cooperation with the developing countries". It was prepared for Johannesburg World Summit 2002. The aim was to cooperate in the field of energy whose importance has been rapidly increasing in globalising world. Accordingly, there are three dimensions of energy; social, economic and environmental, which are the keys of sustainable development. Cooperation is significant especially between the developing countries, which have been increasingly relying on imported energy as a result of increasing energy demand. There was a mention of the EU Energy Initiative aiming at reducing the number of poor people by 2015. Actions would be taken in international, regional and national levels, including;

- institutional capacity building,
- cooperation in technical fields,
- developing market,

- know-how transfer.

Energy sector needed reforms and transfer of technology in developing countries; their energy demands should be managed effectively to support energy saving and energy efficiency. Security of supply is also significant; this may be enhanced through diversification of energy supply. Therefore, investment was needed to promote the development of renewable energy, gas and nuclear. Financial aid was important for facilitating networks and interconnections as well (European Commission, 2002).

Similar to the paper above, communication titled as "Global partnership for sustainable development" was about cooperation with developed countries. The paper aimed at making the EU contribute to sustainable global development. A general framework was drawn here addressing trade, coping with poverty, financial development etc. Energy issue and environment should be thought hand in hand for sustainable development. The aim was establishing measures that could combat against the disappearance of natural resources (European Commission, 2002);

- creating a mechanism for efficient management of water resources,
- promoting cooperation in energy and development fields,
- supporting the implementation of global agreements on environment,
- widening the application area of Global Monitoring for Environment and Security, and,
- supporting better governance in all mentioned fields.

In 2004, again a communication was published, "ACP – EU Energy Facility". It was on the creation of an Energy Facility valuing EUR 220 million which would enhance the access to energy services through modern technology in Africa, the Caribbean and the Pacific. The aid could lead other investors and funding to contribute to development in these places. The Commission determined three priority areas;

- energy services and delivery; it must be ensured that investments are social, economic and environmentally sustainable,
- people can access energy services,

- a convenient environment creation; implementation of proper energy policies hinge on good governance.

The facility promoted good governance which would be concentrated on suitable environment for energy. Comprehensive investments for the future should be promoted. The governing body of the Facility could be appointed from the Commission. In June 2005, its creation was approved and in April 2006, its implementation was approved by the Commission (European Commission, 2004).

In 2005, a directive was applied; "Security of supply of electricity". The internal market that the EU has been trying to establish will be the world's largest electricity and gas market. In order to ensure its functioning, the Union created rules and obligations to secure the electricity supply and launch network investments. It should be noted that the directive was prepared after blackouts in the EU and the US. They reminded the importance of network management. With this directive, the Union created rules for securing electricity supply, insuring internal energy market's functioning and interconnection between member states and balance demand and supply. The legislation subjected member states to establish safeguarding policies clear, common and fair on electricity supply. Following points must be included to these policies;

- guaranteeing durableness of electricity supply,
- supporting the internal energy market and cross-border cooperation to secure electricity supply,
- decreasing the effects of rapid growth in demand of electricity,
- diversification of electricity generation resources,
- supporting energy efficiency and technology and innovation on energy,

periodically modernizing networks of transmission and distribution for continuous functioning.
Independent authorities and the European Regulators Group for electricity and gas assigned to responsible for monitoring the application of the directive (European Parliament and Council of the EU, 2005).

In 2006, cooperation in energy field gained importance again, and two legislations were published. The first one was "the Global Energy Efficiency and Renewable

Energy Fund", supporting and encouraging private sector investments in developing countries. It has been mentioned in the energy efficiency section (European Commission, 2006).

The second one was "the Energy Community Treaty" issued by the Council as decision. The treaty established internal electricity and gas market, and signatories were the EU members and six non-EU states; Albania, Bosnia and Herzegovina, Serbia, the Former Yugoslav Republic of Macedonia, Montenegro and the UN interim administration mission in Kosovo. The treaty entered into effect on July 1, 2006. The purposes were;

- to establish a durable market that invited the investors to insure constant and uninterrupted energy supply,
- to establish one sole area for trade in network energy,
- to strengthen supply security through cross-border relations,
- to advance energy efficiency and renewable energy sources,
- to support competition in the market.

The internal market was purged from internal barriers, customs duties and restrictions on import and export. The Community also had right to implement its regulations on energy, environment and competition. A governing body was created, responsible for the management of regional energy markets, establishing common policies and measures and it was made up of one representative from each of the signatory states. The decisions of the Community had binding status however; recommendations did not (Council of the EU, 2006).

Attempts to encourage cooperation with non-EU states continued in 2007. "Black Sea Synergy" was also a communication paper, proposing cooperation with Bulgaria, Romania, Middle East and Central Asia. The aim was to remove problems on stability, prosperity and security, and promote regional responsibilities and bilateral trust. It could also lead further cooperation in other areas and strengthen relations with mentioned states. Although the cooperation supported measures on ensuring democracy, human rights and sustainable economy, its most significant point was energy. Black Sea is a strategic region; energy producers, transit countries and consumers ensuring energy supply security make it significant. The synergy also supported renewable energy, energy

efficiency, modernizing energy infrastructure as well as energy security in these countries. Therefore, it would not be wrong to say that the primary aim was to enhance the EU's security of energy supply. The Union can use its Neighbourhood Policy as a tool for achieving the cooperation (European Commission, 2007).

In 2009, the EU decided to renew its oil stock system to diminish the effects of supply crisis and the Council applied a directive, "Stocks of crude oil and petroleum products". Its rules were arranged to be compatible with those of International Energy Agency (IEA). The aims here were to;

- enhance security of oil supply through solidarity between member states,
- preserve minimum oil stocks and petroleum products,
- create measures such as oil storage to use in emergency times.

Accordingly, national governments must hold a total oil level that is equal to, at least, three months average daily net imports. They must ensure that their stocks are accessible. To ensure continuity of stocks, member states could set up a central stock holding entity that would maintain stocks of oil (Council of the EU, 2009).

As the law necessitates, states applying the EU membership are subjected to negotiations to prepare themselves for full membership. During these negotiations, candidate countries are asked to implement the EU acquis. The Commission prepares a report on their progress each year. The report here is on Croatia's energy situation (European Commission, 2010). Accordingly, the country had progressed a lot; however, additional effort was still needed in the fields of electricity and gas market. The EU's accession conditions are based on market competitiveness, security of supply and environment protection. Functioning of the internal market, creation of electricity and gas market and promoting renewable energy are significant. The country had done a lot; nevertheless, it must strengthen administration performance and ensure the independency of energy sector authorities.

Natural gas is vital for energy policies of the EU as it represents one quarter of primary energy supply. It is mainly used for electricity generation, feedstock and

heating. Because its domestic production level has been decreasing as opposed to the increasing consumption level in the last decade, the Union's dependency on imported energy has been increasing and supply security has been weakening.

Russia has been the largest energy natural gas exporter of the EU; the country provides more than a quarter of the consumed gas. The supply of natural gas from Gazprom is transmitted through transit countries, almost 80% through Ukraine and 20% through Belarus. Therefore, the transit countries have a vital role in the Union's gas supply (BBC, 2009).

There have been political and trade conflicts between Ukraine and Russia since 2000s. The situation has affected the natural gas supply of the EU several times. Any disruption affects domestic energy market, economic activities, and particularly the well-being of the European citizens. On 1 January 2009, Russia started to decrease the level of gas supply to Ukraine and the two failed to reach an agreement for a long time. Czech Republic, Poland, Romania, Turkey and Bulgaria were affected by the reduction. The situation stressed the EU's dependency on Russia, and pushed the EU to take new measures for decreasing its dependency and securing its supply (Cohen & Graham, 2009).

In this regard, the regulation, "Security of supply of natural gas" was published in 2010. The aim here was to secure gas supply against a possible disruption through supporting a coordinate response and strengthening internal gas market. The regulation established a measure to ensure the continuity of gas supply of protected consumers, households, small and medium-size enterprises and social services. A framework was laid down to create common standards for infrastructure and supply of protected customers, preventive actions and emergency action plans. The Gas Coordination group was created to support coordination of measures on security of gas supply. Besides, all actions in gas markets must be transparent in order to better manage emergency situations and prevent them as much as possible (European Parliament and Council of the EU, 2010).

Similar to the Commission report on Croatia's energy situation, three country reports were published in 2011. The first one was "Iceland – energy" report. The EU's acquis on energy policy cover enhancing internal energy market,

competitiveness, security of supply, renewable energy, security of oil stocks, emergency management nuclear energy and environmental protection. Accordingly, although Iceland was in a good progress, stocks of oil, energy efficiency and independent regulatory authority needed to be improved (European Commission, 2011).

The second one was "the Former Yugoslav Republic of Macedonia- energy". Advancement was monitored in energy sector; however, effectively functioning energy market had not been established yet. Competition conditions needed to be ensured and the radiation protection regulator had not been ensured yet (European Commission, 2011).

The last one was "Turkey – energy". Though the energy situation of the country progressed, it was irregular and insufficient. Policy implementation on internal electricity market and renewable energy was well enough, sufficient harmonisation was presented; nevertheless, efforts were still needed in nuclear safety and security issues. Security of supply, energy efficiency and the gas sectors also required development (European Commission, 2011).

The last legislation of 2011 was a communication. According to "Security of supply in the EU and international cooperation", the EU imported 60% of its gas and 80% of oil. Therefore, internal market should be completed and the Union's relations with its supplier non-EU countries should be strengthened. When they are making bilateral agreements with third states, they should inform the Union. Information exchange mechanism should be founded. Diversification of energy supply was also significant for ensuring supply security. In this context, a four-point strategy was prepared;

- establishing the internal energy market,
- empowering partnerships to ensure competitive, sustainable and secure energy,
- developing measures to support the access of developing countries to sustainable energy,
- promoting the policies of the EU across its territory.

Supply routes should be diversified; promotion of Southern Corridor is significant in this context. Renewable energy projects in southern Mediterranean states should be supported. The significance of Russia for its energy supply was highlighted; the Commission recommended privileging relations with Russia as well as cooperating with Ukraine to ensure its gas supply and support establishment of electricity network between EU, Russia and Belarus. The Union should strengthen its relations with its hydrogen suppliers as well; these are Norway, Libya, Saudi Arabia and Algeria. The Commission stated that cooperation between member states was needed to make the EU speak with one voice in the international arena. To achieve this, Strategic Group for International Energy Cooperation could be established (European Commission, 2011).

In 2014, the Commission prepared the "Energy Security Strategy" as a response to the supply disruptions because of the crisis between Russia and Ukraine. As mentioned above, gas supply is vital for the EU as it represents the quarter of the total primary energy consumption (British Petroleum, 2015). The communication included recommendations to the member states that were heavily dependent on Russian gas. Accordingly, cooperation between member states was needed and would be better than bilateral relations on gas supply. If they cooperate, they would be stronger and minimize the effects of possible gas disruption. The Union determined to implement "stress tests" to check the system of gas supply. The aim was to measure the impact of a potential gas disruption and how to cope with it. There were two scenarios;

- the entire cut-off of Russian gas,
- a break in Ukraine gas which is intermediate between European market and Russian gas.

Each scenario was tested one month and six months. As a result, it was understood that national governments needed to enhance their security of supply by describing proper plans to prevent any crisis; they should improve their storage facilities; and planned infrastructure projects should be completed, e.g. Hungary – Slovakia interconnection, LNG gas terminal in Poland. A mechanism to switch fuels in emergency times should be established. Member states that have more gas

than they need should help others to prevent shortages (European Commission, 2014).

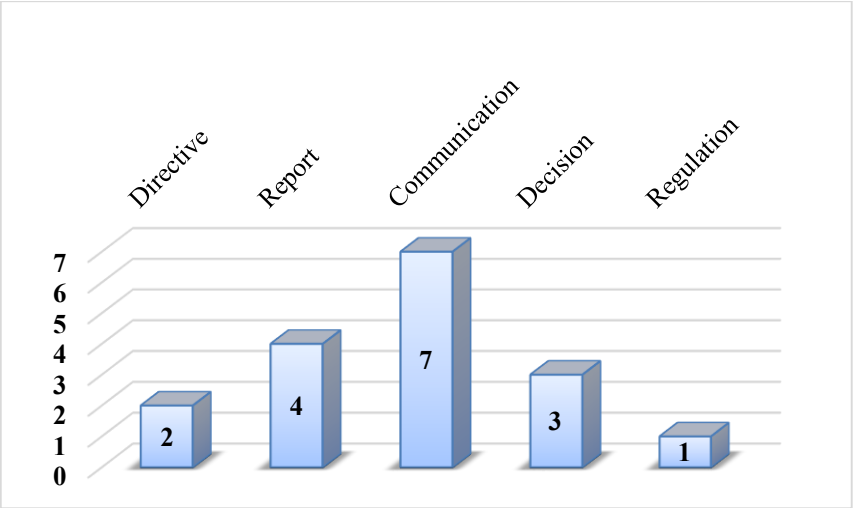


**Figure 6.Types of legislations on security of supply, external dimension and enlargement**
**Source: EUR-Lex; Summaries of EU Legislation; Energy**

The last Figure is on energy security, external dimension and enlargement. 4 out of 17 documents are country reports of negotiating states. 6 papers are binding and 7 are not. Most of the non-bindings are on cooperation with third countries, i.e. Black Sea Synergy.

The chapter here tried to analyse previous legislations on energy issue and common energy proposals under "energy efficiency", "European energy policy", "internal energy market", "nuclear energy", "renewable energy" and "security of supply, external dimension and enlargement" headings. Witnesseth through the figures, the decision makers have been reaching a common opinion more easily in nuclear energy and internal energy market fields.

The following chapter will investigate "the Energy Union" project through the official Package published by the Commission, and legislations above and the Package will be compared and contrasted in the Results chapter.

## CHAPTER 5

## 5. The Energy Union Package

The European Commission has prepared common energy policy proposals in response to the affairs influenced the Union adversely; however, none of the efforts was enacted. The Energy Union Package, published on 25 February 2015, is the latest product of the efforts. The study here gave brief information on it in "European Energy Policy Development", and the chapter here will discuss the Package in detail[15].

Energy Union is a strategy for energy containing determined climate policy aiming to ensure that EU member states provide their all consumers secure, sustainable, competitive and affordable energy.

The Commission thought of an Energy Union which;

- makes the member states aware that they are dependent on each other and trust and solidarity is needed to be represented by a single voice in the international arena,
- is an EU-wide system enables free flow of energy and has effective internal energy market,
- has experts and skilled labours working for future of the energy,
- establishes a climate friendly, sustainable and low-carbon economy,
- has innovations, technological development and competitive industry delivering energy efficiency inside and outside Europe,
- protects consumers by trying to reduce their bills, and
- encourages investors with transparent and accurate information (European Commission, 2015, p. 2).

The strategy began with a self-assessment, and explained why the Union needs Energy Union. Fossil fuel-intensified economy, out-of-date technology and business models, lack of coordination between national energy policies and

[15] The chapter here will only use the official "Energy Union Package - A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy" as a reference and it will be demonstrated at the end of the Chapter.

barriers in the market make the EU vulnerable. According to the latest data, the share of imported energy is 53%; and this makes the EU the largest energy importer. Six member states import their gas from a single non-European supplier, which means they are heavily dependent on an external supplier and their security of supply is weak. The share of oil use in transportation sector is 94% and 90% of it is imported. The share of natural gas in total imported energy is 38% and it is predicted that 1% growth in saving of energy can decrease the amount of imported gas by 2.6%. Annual investment on energy is over EUR 120 billion, and additional EUR 1 trillion is needed to achieve 2020 goals. Although electricity prices for whole sales are lower than most of the non-EU countries, they are higher than the prices in the US and this affects the competitiveness of the EU (European Commission, 2015, pp. 2-3).

The EU already had rules on energy but they haven't been brought into practice, in other words, there have been 28 different energy policies and changes are needed. An internal European energy market should be achieved to increase the competition and efficiency while ensuring affordable prices for all consumers and improved utilisation of facilities generating energy.

Retail energy market which for household consumers also needs changes; all households in the EU should have a right to manage their energy costs through choosing their energy suppliers.

Renewable energy is ranked in priority; the Union is leading technology and innovation on renewables but countries in other parts of the world are also working on clean and low-carbon energy. The Union needs to continue its efforts to preserve its position. This can also contribute to the economic wealth of the Union while creating new businesses and job fields.

The EU is now on a critical point; it can renovate the existing system through implementing the strategy or continue to act in the current way.

The Energy Union strategy was built on five dimensions;

- energy security, solidarity and trust,
- a fully-integrated energy market,
- energy efficiency contributing to moderation of demand,

- decarbonising the economy,
- research, innovation and competitiveness (European Commission, 2015, p. 4).

### 5.1. Energy Security, Solidarity and Trust

The security of supply issue was built upon Energy Security Strategy prepared in 2014. The Strategy clearly showed the vulnerability of the EU, and called the decision makers to prepare rules enhancing the national government's security of supply. Energy efficiency and internal energy market are key driving force for the energy security.

Diversification is a must for energy security. The challenges that the Union has been facing during the last several years proved that diversification has to be ensured in energy sources, suppliers and routes. Especially, gas supply is a sensitive issue for the Union. Completion of the Southern Gas Corridor is significant to import gas from Central Asian countries. The foundation of LNG hubs in Northern Europe could contribute greatly to security of supply through several suppliers. These hubs are needed in Eastern and Central Europe, and Mediterranean region as well. LNG is significant because it has a potential to meet the gas need in possible emergency times.

Infrastructure, too, must be extended to enable gas flow all across the EU territory. Therefore, member states, together with all the stakeholders, have to work together to enhance the energy security for both households and businesses.

Although the recent global oil prices are low due to over-production, oil consumption must be decreased.

The EU is also dependent on nuclear fuel imports, so diversification of energy resources is vital.

The interconnection of national electricity systems and establishing European network is significant for preventing any interruption.

Energy has been used as leverage in foreign policy agendas of many producer countries. Taking it into consideration, the Energy Union will strengthen the position of the EU in the global energy markets; in other words, if member states

act together, they can increase their weight. The Commission will participate in negotiations to ensure that provisions contribute to energy security. The Union's trade policy can also help here; an effective trade and investment agenda will be prepared by the Commission.

Establishing energy partnerships with current significant actors like United States, Canada, Turkey, Algeria, Turkmenistan, Azerbaijan, Middle East and Africa will contribute to energy security.

Relations with Russia and Ukraine are essential for the Union. The EU will redesign its relations with Russia when conditions are ripe; it is seen as significant for the mutual benefit of the two sides. Strategic partnership with Ukraine, the transit country of natural gas, needs to be strengthened.

European Neighbourhood Policy will be used to empower the Energy Community through assuring effective application of energy, environment and competition acquis[16], reforms on energy market and encouraging energy sector investments.

The Commission will have observer status; when negotiating with non-EU countries for buying energy, member states should inform the Commission to enable it evaluate the conformity of the agreements with energy security criteria, as well as the EU law.

The regulation on Security of Gas Supply will help the Commission to suggest insurance of transparency of contracts on gas supply which would have an effect on energy security.

### 5.2. A Fully Integrated Energy Market

The EU has progressed on completion of the internal energy market; however, its energy system does not satisfyingly perform still. More has to be done to assure investments, competition and market concentration.

[16] Acquis: The entire obligations and rights binding on the whole Union. Countries apply for memberships have to interiorise it before joining. Source: http://ec.europa.eu/enlargement/policy/glossary/terms/acquis_en.htm

National energy markets must be connected and cross-border connection must be achieved because the lack of connection between electricity and gas transmission networks affects adversely the performance of internal energy market.

Things that have been made on infrastructure field up to now are Projects of Common Interest (PCIs) including 248 projects, and 33 projects belong to European Energy Security Strategy. The Commission has been responsible for monitoring the implementation of PCIs.

To make the energy system more sustainable, secure and competitive, annually €200 billion investment is needed in generation activities, energy efficiency and networks. The European Investment Bank, the European Structural and Investment Fund and the Connecting Europe Facility have already been supporting; however, private sector is expected to cover most of the investments as well.

Internal energy market is key to the Energy Union. The implementation of the existing competition rules can help to ensure that companies do not deform the market. Interconnection of the networks will enable free flow of energy across borders. In this regard, the ENTSO for Electricity and Gas has to be enhanced. The establishment of regional operational centres is also a must for planning and managing the cross-border energy flows, as well as preventing challenges for energy supply.

Further proposals will be prepared by the Commission to reconstruct and strengthen electricity market to increase security of supply. The connection of the electricity generated from renewables and enhancement in energy storage are significant for meeting the demand and securing the supply.

Cooperation with Central and South-Eastern countries will surely contribute to the internal energy market; integration of their markets to the European energy market can support flexibility of the system.

National regulations are needed to be in compliance to ensure the European citizens are able to meet their energy demand from a company within the European borders, and they should have comprehensible, easily-accessible and usable tools and financial encouragement for energy saving.

Extensification of manufacturing and use of smart and eco-friendly technologies will continue to be supported by the Commission. Necessary technology must be accessible to enable the consumers to control their energy consumption.

It must be ensured that end-users are protected from rise in energy costs. Barriers and tariffs should be removed to encourage investments and participation of new-market players.

Vulnerable consumers with low-income and inefficient living conditions must be protected by local, regional and national authorities; energy prices should be kept low.

### 5.3. Energy Efficiency as a Contribution to the Moderation of Energy Demand

In 2014, the increasing energy efficiency, at least 27% by 2030 target was set by the Commission. The target will be revised and can be changed as 30% efficiency by 2030.

National governments will be encouraged by the Commission to attach importance to energy efficiency while preparing their own energy policies.

Consumers have to be informed of increasing their energy efficiency through legislations, energy labelling and eco-design technology.

Buildings and transportation sector have significant role in energy efficiency. Most of the imported gas has been used for heating and cooling. Energy efficient buildings can decrease the amount of gas import. Local and regional authorities must take actions for increasing the energy efficiency potential of buildings. European Structural and Investment Fund will be called by the Commission to support technical assistance and establish new financing tools. The European Fund for Strategic Investments also helps major investments in renewing buildings.

“Global excellence for energy efficiency” will be developed by the Commission to contribute to G20 Energy Efficiency Action Plan, which will support the implementation of energy efficiency targets in UN Sustainable Energy for All and the IEA.

The share of transportation sector in European energy consumption is more than 30% and the sector has been heavily dependent on oil products. Energy efficiency in transport can be achieved through constricting carbon dioxide emissions, increasing fuel efficiency both for public and private cars and providing alternative fuels. This is also significant for energy security; dependency on imported oil will be decreased. Electric vehicles can be alternative; however, establishment of relevant infrastructure, such as charging stations, storage facilities and electricity grid, has to be realized to extend their use.

### 5.4. Decarbonisation of the Economy

The Emission Trading System, reducing greenhouse gas emission and increasing the share of renewables targets are the backbones of the Union's ambitious climate change policy. Functioning of the Emission Trading System is significant in many aspects such as delivering low-carbon investments, determining price and well-being of internal energy market. Moreover, national governments' energy and climate policies should be in harmonisation with the System.

The EU is committed to reach 40% emission reduction by 2030 and this commitment expected to contribute to international climate agreements, especially to 2015 Paris Climate Conference. Other countries, especially developed ones, will be encouraged through climate diplomacy to adapt the Union's emission reduction target.

Extending the use of renewables will surely contribute to decarbonising the economy. Increasing the share of renewables in total primary energy consumption by 20% by 2020 has already been committed by the EU. The percentage was risen to 30% in 2030 package. However, the achievement of this target is directly related with 2020 target. Production from renewables and development of its technology must be promoted by market-based measures. Investors should be encouraged by keeping start-up costs down. Investments in sustainable alternative fuels, such as biofuels, must be encouraged and ensured. The EU Investment Plan can contribute to the financing. All that can help the EU to become a renewable energy leader.

The interconnection of electricity networks is needed to be ensured and extended.

### 5.5. An Energy Union for Research, Innovation and Competitiveness

Research and innovation are vital for Energy Union; they can ensure the future of energy and make the EU leading renewable energy power.

Smart grids, eco-design and user-friendly technologies, environment-friendly transportation, the safest nuclear energy could bring the Union new businesses, jobs, growth and competitiveness.

Coordination of the research and innovation centres and industries, and cooperation between universities must be promoted.

Actions that would be committed by the Commission and the member states are;

- being number one in renewable energy technologies, including eco-friendly manufacturing, use of biofuels and energy storage,
- ensuring the contribution of end-users through smart grids and smart home appliances,
- Energy efficient systems,
- transformation of transportation sectors through emission reduction and use of alternative fuels (European Commission, 2015, p. 16).

Emission Trading System and carbon capture and storage should be reformed in order to reach 2050 target in the most efficient way.

Security, safety and non-proliferation standards of nuclear energy, which present almost 30% of the Union's electricity, must be at highest level. The EU should maintain its leadership in nuclear domain through ITER.

It must be ensured by the Commission that member states have synergy between the EU funds.

New technologies will bring new businesses and jobs; the Union must provide training and education to skill up its workforce.

### 5.6. Energy Union Governance

There is an absolute need to integrated governance and monitoring mechanism in order to ensure that local, national, regional and European actions on energy serve for the Energy Union targets. Responsibilities of governance mechanism are;

- collecting and combining all actions related with energy and climate policy,
- safeguarding the implementation of internal energy market and achievement of 2030 targets on energy efficiency, renewables, and interconnections,
- consolidating current planning and reporting necessities, avoiding pointless administrative problem,
- expanding cooperation between member states, and with the Commission,
- establishing energy communication with stakeholders to promote active participation in managing transition,
- enhancing analysis, data and intelligence to strengthen the Energy Union by pooling necessary information and making it transparent for all stakeholders,
- preparing annual reports for the Council and the Parliament on the situation of the Energy Union to address the priority areas and conduct policy debate (European Commission, 2015, pp. 17-18).

The Commission will lay down a governance process, and despite their links, governance and monitoring processes will be controlled independently.

### 5.7. Delivering the Energy Union

The achievement of the Energy Union requires commitment of the member states, EU institutions, the European Investment Bank and all other stakeholders, at local and regional level, in line with the principles of subsidiarity, proportionality, and better regulation.

The EU must be in a position that can react to sudden situations, grab new chances, and adapt to future trends. The Commission will use its right to respond

the events whenever needed, and it calls the Council and the Parliament to support this strategy and approve the Energy Union, and to participate in its implementation cooperating with all stakeholders (European Commission, 2015).

There are fifteen points, attached to the end of the study, summarizing the Strategy and presenting a roadmap through timetable for implementation.

The chapter here has tried to flesh out the official Energy Union Package, and the following chapter will compare and contrast the Package with existing legislations on energy analysed in Chapter 4.

## CHAPTER 6

### 6. Results of the Analysis

The study here has concluded the analysis of legislations on energy. Comparing and contrasting of the previous legislations and the Energy Union Package will be done in accordance with the key words of the study and the issues that are related to those keywords.

As the analysis indicates that the Energy Union is like a combination of legislations prepared before; the package covers previous legislations on energy and climate change.

"Energy security" is the most significant component of the Package, and as mentioned, this side of the Package was based on "Energy Security Strategy 2014". In fact, almost all legislations on energy are, somehow, related to energy security. Energy efficiency, diversification of energy sources and energy suppliers and supply routes, internal energy market, renewable energy, external relations, energy saving, energy storage, low-carbon economy, infrastructure and technology; they are all major key players associated with the energy security.

"Diversification" is something inevitable to secure energy supply. Legislations that involve the term "diversification" are; "For a European Union energy policy", "An energy policy for Europe", "EU energy security and solidarity action plan", "European Energy Programme for recovery", "Energy prices and costs in Europe", "Guidelines for Trans-European energy infrastructure", "Encouraging the use of biomass as an alternative source of energy", "Green Paper on the security of energy supply", "Energy cooperation with the developing countries", "Security of supply of electricity" and "Security of supply in the EU and international cooperation". All of them see diversification as a must. They've embraced the term in terms of source, supplier and supply route and provided alternatives.

The Union's "dependency" on imports from non-European countries has frequently been noticed that the EU is uncomfortable with its dependency on Russian natural gas is particularly obvious. Undoubtedly, the reason behind this has been the attitude of Russia aftermath of adverse events in recent years. The

country has repeatedly displayed that it is not a reliable source. The need to decrease the Union's dependency on it has constantly been articulated.

Transparency on natural gas negotiations can contribute to supply security. As it is well known, there is a global market for oil; yet, this is not the case for natural gas. Countries engage in the trading of natural gas through bilateral agreements, and these agreements are often closed to the public; the price they agree upon is unknown. Surely, this situation exerts negative impact on the world's largest energy importer. According to Gazprom's statistics, the company's export to Western European countries accounts for 82%, while the share of Central European states is 18%. 17 out of 28 member states imported natural gas from Russia in 2015 (Gazprom), and this means 17 different bilateral contracts. The Commission has a desire to be an observer participating in negotiations for the well-being of the whole Union. If the Commission is informed, political pressure on member states can be eliminated, and speaking with one voice can strengthen the Union, argues the Package.

The package touched on the major impact of neighbours and other non-European countries on the Union's energy security. Regulation, "Financial cooperation with non-EU countries on nuclear safety"; communications, "the Global Energy Efficiency and Renewable Energy Fund", "Nuclear non-proliferation", "the Energy Community Treaty", "the Black Sea Synergy", "Security of supply in the EU and international cooperation", "Energy cooperation with the developing countries", "Global partnership for sustainable development", and "Security of supply in the EU and international cooperation" and "Energy Charter Treaty" clearly stressed the need to strengthened cooperation with non-member states. However, as is seen, most of them are communication, in other words, they are not binding.

The completion of the Southern Gas Corridor was seen as a must for diversifying the suppliers, thus securing energy. The project had already been mentioned in "Security of supply in the EU and international cooperation" communication.

The Package placed emphasis on LNG and its role in energy security. When previous legislations were analysed, it was noticed that only four of them mentioned it. However, three of them are regulations, and one of them is a

directive. Taking all that into consideration, it's fair to say that steps that have been taken are concrete and clear. Similar to the Package, they were about the necessity of its infrastructure.

"Energy efficiency" is the most frequently mentioned term in legislations. This can be attributed to its relation with all other components of the Energy Union. The targets on increasing energy efficiency by 20% by 2020 and by 27% by 2030 are noticed. Similar to previous legislations, the Package indicated that energy efficiency was able to contribute to energy security, decreasing dependency, internal energy market and decarbonisation. Energy efficiency of the buildings and transportation sector has continued to maintain its place in the agenda.

"Internal energy market" is the second most-used term in legislations and it has been identified as the key driver of energy security in the Package. The complete establishment of the market and its functions have been discussed in a number of legislations.

As is known, there is an already existed internal market enabling free movement of people, capital and goods, and it has been trying to extend to energy field. The EU has had an ambition to establish the market for a long time; however, the lack of infrastructure is still posing a problem. Union-wide interconnection of the member states' markets and networks is needed. Completion of the infrastructure projects, included in the "Projects of Common Interest" and "Energy Security Strategy", previously mentioned above, are seen as key to connect the markets and enhance security of supply.

Additionally, the Package intends to review and improve the Agency for Cooperation of Energy System Regulators and the European Networks of Transmission System Operators for Electricity and Gas, which have been established by legislations above, for better functioning of the market.

Consumer protection, as in previous legislations, has been undertaken in the Energy Union Package, too.

Decarbonisation of the European economy or low-carbon economy is one of the components of the EU's climate change policy and one of the targets of the Package as well.

The Kyoto Protocol created an international awareness on climate change. Greenhouse gas emissions have a huge impact on climate change, and signatories were requested to decrease their emissions to levels of 1990s. The parties were supposed to fulfil their promises, and the EU began to work on it in 2003. The directive, "Greenhouse gas emission allowance trading scheme" set limits on emissions and created the trading mechanism. Later, "decarbonisation" gave rise to many legislations; however, almost all of them were communication, in other words, they did not have a binding status. Now, the Energy Union again is dwelling on the issue.

"Climate change" is the third most-used term of all legislations. As noted above, climate change was brought to the EU's policy making agenda, and since then, it has been on the agenda.

Nuclear energy had been regarded as a tool to diversify energy mix, decarbonise the economy and increase supply security in legislations listed. However, the Package approaches the nuclear from a different standpoint; nuclear fuel used in reactors is also imported, and the EU is highly dependent on imports, as nuclear represents 18% of the total primary energy consumption (British Petroleum, 2015).

Additionally, the study here has not seen anything mentioned on this issue in previous legislations. The Package sees the unconventional fossil fuels as a tool to decrease energy dependency and increase energy security. However, a thorough environmental assessment must be carried out and the consent of the public will be determinative.

It is worth mentioning that the use of the keywords is increased between 2004 and 2014; most of the legislations on energy and climate policies are prepared by Barroso's Commissions.

As seen above, each of the legislations has a different status; communications, directives, regulations, opinions… The study here made figures demonstrating their numbers to measure the cohesion of the papers. As mentioned earlier, only directives, regulations and decisions are binding.

# CHAPTER 7

## 7. Conclusion

The European Union, mainly the Commission of the EU, has been trying to apply a common energy policy for a long time; generally, the Commission has used its own initiative to prepare a proposal.

The study here arose from the Energy Union Package, the latest product of the efforts. The main goal of the study was to determine whether the Union wide energy policy was a new idea or a long lasting effort for establishing a common energy policy. Was the energy issue really deprioritized? If not, what are the former efforts? Are they different from the Energy Union Package, comparing and contrasting the former common energy policy efforts and the Energy Union?

The methods used were qualitative content analysis and comparative analysis. As the requirement of content analysis, keywords derived from the Package were utilized while conducting the study. These keywords were; *energy policy*, *energy security (security of supply, security of demand)*, *diversification*, *dependency*, *energy efficiency*, *internal energy market*, *decarbonisation (low-carbon economy)* and *climate policy*. The keywords can be entitled as the building blocks of the Package and they were used for analysing the former energy policy legislations of the EU, and comparing and contrasting them with the Package. The previous legislations on energy were about 110 documents, and to make the comparison more reliable, papers containing the keywords were predominantly used.

Double reading strategy of Postmodernist theory was used to gain a different point of view on documents analysed. Constructivist approach corroborated that norms and rules created by the Union affect its interests and attitudes, and they direct the Union's and its member states' political actions. The Union, now, is trying to establish Energy Union through these norms.

On behalf of the Union as a whole, the Commission propounded a proposal on common energy policy in response to any event affecting it. Because the EU have been heavily dependent on external energy supplies, the affairs, such as Iranian Revolution and Gulf War, often pose threats to the European energy supplies. More recently, the ongoing crisis between Russia and Ukraine has been rather

disquieting for the EU and thus causing the need to the emergence of the Energy Union. Hence, the study put forwarded the idea that the energy security has always been the ultimate priority of EU level energy policies and other components are the tools to ensure this. For instance, the highest share in natural gas consumption is owned by buildings' heating and cooling. Energy efficiency is a measure to decrease the amount of consumption, and energy efficiency of buildings has been highlighted several times. Increasing the share of renewable energy resources is a way to diversify energy supply, decrease the level of imported energy and increase the security of supply as well.

This might be the first study investigating the Energy Union in the light of former common energy policy suggestions. The implications were discussed in the chapter, "Analysis and Results", and the findings contributed to the analysis. Consequently, the analysis provided that the Energy Union Package made no significant difference to previous common energy policy drafts. Since the idea did not attract enough attention or the member states could not agree on, almost the same frameworks were repeated every time. The objectives are the same as previous ones; therefore, previously prepared papers are frequently given as point of reference. However, as is seen, the Package is meticulously prepared, and it is more organized, comprehensive and structured than former drafts.

Further research could be useful to explore the reasons why the member states could not agree on a common energy policy thus far. In brief, although they have been together under a single roof, each of the 28 member states are like different individuals; their needs, interests, level of developments and populations are differentiated; and in terms of energy, the role of energy sources in their economies, their suppliers and dependency levels, and infrastructure they have are dissimilar.

Currently, the Energy Union has not been delivered yet. On May 18, 2015, Maroš Šefčovič, the Vice-President of the Commission and the leader of the Energy Union Project Team, launched an Energy Union Tour which enabled him to take part in dialogues with national governments, parliaments and all other stake holders to convey the benefits of the Energy Union. He clearly indicated that the prior objective of the Package was to evade the EU's energy dependency as well

as better functioning of the common energy market, energy efficiency, low-carbon economy and to be the global leader in renewables (the European Commission, 2015). When Šefčovič completed the Tour in Greece on 10 March 2016, he had already visited other 26 member states, excluding Spain. He wrote his experiences on his blog during the Tour to inform the public and stated that he did not receive a negative reaction.

On November 18, 2015, nine months after the launch of Energy Union Package, the Commission published a progress report. When progress that has been made is examined, one can reach the conclusion that;

- it is expected that the EU can meet 17.6% energy efficiency by 2020 but the Commission believes 20% will have been achieved only if existing legislations are fully implemented;
- 20% reduction in greenhouse gas emission by 2020 and Kyoto Protocol targets can be fulfilled, yet, more needs to be done to achieve 2030 target;
- electricity and gas markets still needs progress;
- working in the field of nuclear safety continues in a good direction;
- energy Security Strategy adopted in 2014 needs to be revised;
- oil stocks in the member states should be reported by the Commission regularly.

Accordingly, the EU has been near the delivery of the Energy Union, and it is expected to deliver in 2016.

The study here confirms previous findings and contributes additional evidence that suggests the Energy Union idea complement the earlier common energy policy drafts. It has gone some way towards enhancing our understanding of the EU's necessity to a common energy policy.

It is also determined that the EU has been worked better on energy efficiency, internal energy market and nuclear energy fields; nevertheless, more efforts are needed on renewable energy, unconventional oil and gas, and LNG fields. First, binding legislations on renewable energy issue are very limited. The Union is aiming at to become number 1 in renewables in the world but what it has done up

to now is seen insufficient. The Union should make the member states work more on renewables.

Second, the emphasis on unconventional oil and gas is also seen unsatisfying; the unconventionals could help the Union to diversify its energy supply and contribute its energy security. More investments should be made on their technology and innovation. This could create new businesses and job fields and contribute to the economy as well.

Lastly, it would be better to widen the section on LNG. As mentioned before, the share of imported natural gas and its dependency on its gas suppliers make the EU fragile. Through LNG, this fragility could be decreased. It could be better to invest more on LNG terminals, and increase their numbers in where it is possible.

To realise the "Energy Union", the legal procedure may be changed. If the Commission, for instance, could be given legislative power, documents it prepares would gain bindingness; or the way the Council and the Parliament take decision might be changed to take decisions easily. It is believed that, for their own sake, the member states must cooperate in the field of energy as it is the driving force of growth and development. A common energy policy could be beneficial for the European Union as a whole; speaking with a single voice could make the Union stronger and more dedicated in international arena, and increase its bargaining power against external suppliers.

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# APPENDIX

## Appendix A

**Articles on Energy field in Lisbon Treaty**

*Article 2C*

*1. The Union shall share competence with the Member States where the Treaties confer on it a competence which does not relate to the areas referred to in Articles 2 B and 2 E.*

*2. Shared competence between the Union and the Member States applies in the following principal areas:*

***(a) internal market;***

*(b) social policy, for the aspects defined in this Treaty;*

*(c) economic, social and territorial cohesion;*

*(d) agriculture and fisheries, excluding the conservation of marine biological resources;*

***(e) environment;***

*(f) consumer protection;*

*(g) transport;*

*(h) trans-European networks;*

***(i) energy;***

*(j) area of freedom, security and justice;*

*(k) common safety concerns in public health matters, for the aspects defined in this Treaty.*

*3. In the areas of research, technological development and space, the Union shall have competence to carry out activities, in particular to define and implement programmes; however, the exercise of that competence shall not result in Member States being prevented from exercising theirs*

*4. In the areas of development, cooperation and humanitarian aid, the Union shall have competence to carry out activities and conduct a common policy; however, the exercise of that competence shall not result in Member States being prevented from exercising theirs.*

## TITLE XX

## ENERGY

*Article 176 A*

1. In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to:

(a) ensure the functioning of the energy market;

(b) ensure security of energy supply in the Union; and

(c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and

(d) promote the interconnection of energy networks.

2. Without prejudice to the application of other provisions of the Treaties, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall establish the measures necessary to achieve the objectives in paragraph 1. Such measures shall be adopted after consultation of the Economic and Social Committee and the Committee of the Regions.

Such measures shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 175(2)(c).

3. By way of derogation from paragraph 2, the Council, acting in accordance with a special legislative procedure, shall unanimously and after consulting the European Parliament, establish the measures referred to therein when they are primarily of a fiscal nature.'

**Appendix B**

**The Energy Union in fifteen action points**

1. Full implementation and strict enforcement of existing energy and related legislation is the first priority to establish the Energy Union.

 The Commission will use all instruments to ensure that Member States fully implement energy legislation, in particular the 3rd Internal Energy Market Package, and it will strictly enforce the Treaty's competition rules.

2. The EU needs to diversify its supply of gas and make it more resilient to supply disruptions.

 The Commission will propose a resilience and diversification package for gas in 2015-2016 by revising the existing security of gas supply Regulation.

 The Commission will prepare a comprehensive strategy for liquid natural gas (LNG) and its storage, and

 The Commission will work with Member States to develop access to alternative suppliers, including from the Southern Gas Corridor route, the Mediterranean and Algeria, in order to decrease existing dependencies on individual suppliers.

3. Intergovernmental agreements should comply fully with EU legislation and be more transparent.

 The Commission will propose a revision of the Decision on Intergovernmental Agreements in 2016 to ensure compatibility with EU legislation before agreements are negotiated involve the Commission in such negotiations; develop standard contract clauses covering EU rules and make commercial gas supply contracts more transparent.

4. The right infrastructure is a precondition for completing the energy market, integrating renewables and security of supply.

 The Commission will support the implementation of major infrastructure projects, particularly the Projects of Common Interest, through the available financial means, e.g. the Connecting Europe Facility, the European Structural and Investment Funds and the future European Fund for Strategic Investments to leverage the necessary private and public funding.

 The Commission will bring together information on EU-funded infrastructure projects to bring more coherence and to maximise their impact.

 The Commission will create a dedicated Energy Infrastructure Forum to discuss progress on major infrastructure projects with Member States, regional cooperation groups and EU institutions. It will meet for the first time in late 2015.

5. Creating a seamless internal energy market that benefits citizens, ensuring security of supply, integrating renewables in the market and remedying the currently uncoordinated development of capacity mechanisms in Member States call for a review of the current market design.

 The Commission will propose legislation on security of supply for electricity in 2016.

 The Commission will propose a new European electricity market design in 2015, which will be followed by legislative proposals in 2016.

6. The regulatory framework set-up by the 3rd Internal Energy Market Package has to be further developed to deliver a seamless internal energy market to citizens and companies.

 The Commission will review the regulatory framework, in particular the functioning of ACER and the ENTSOs, in 2015-2016 and will propose appropriate actions to reinforce the European regulatory framework.

7. Regional approaches to market integration are an important part of the move towards a fully integrated EU-wide energy market.

 The Commission will develop guidance on regional cooperation and engage actively in regional cooperation bodies with Member States and stakeholders.

8. Greater transparency on energy costs and prices as well as on the level of public support will enhance market integration and identify actions that distort the internal market.

 The Commission will produce biennial reports on energy prices, analyse in depth the role of taxes, levies and subsidies and seek the phasing out of regulated prices below cost.

 At the national and local levels, action should be taken to protect vulnerable consumers through social policies.

9. The EU has set itself the target of reaching at least 27% energy savings by 2030.

 In 2015 and 2016, the Commission will review all relevant energy efficiency legislation and will propose revisions, where needed, to underpin the 2030 target.

 Member States and regions should make more use of European funds for renovation of housing.

10. Buildings have huge potential for energy efficiency gains. Retrofitting existing buildings to make them energy efficient and making full use of sustainable space heating and cooling will reduce the EU's energy import bills, reinforce energy security and cut energy costs for households and businesses.

 The Commission will develop a 'Smart Financing for Smart Buildings'-initiative to make existing buildings more energy-efficient, facilitating access to existing funding instruments.

 The Commission will propose a strategy to facilitate investment in heating and cooling.

11. The EU needs to speed up energy efficiency and decarbonisation in the transport sector, its progressive switch to alternative fuels and the integration of the energy and transport systems.

 The Commission will propose a comprehensive road transport package promoting more efficient pricing of infrastructure, the roll-out of intelligent transport solutions and enhancing energy efficiency.

 The Commission will take further action to create the right market conditions for an increased deployment of alternative fuels and to further promote procurement of clean vehicles. This will be delivered through a mix of national, regional and local measures, supported by the EU.

12. The EU agreed a climate and energy framework for 2030 at the October European Council. This now needs to be implemented. The EU will provide an ambitious contribution to the international climate negotiations.

 The Commission will propose legislation to achieve the greenhouse gas reduction target agreed at the October 2014 European Council both in the Emissions Trading System and in the sectors outside the Emissions Trading System.

13. The EU has agreed the target of at least 27% at EU level for renewable energy by 2030.

 The Commission will propose a new Renewable Energy Package in 2016-2017. This will include a new policy for sustainable biomass and biofuels as well as legislation to ensure that the 2030 EU target is met cost-effectively.

14. The EU needs to develop a forward-looking, energy and climate-related R&I strategy to maintain European technological leadership and expand export opportunities.

 The Commission will propose a European energy R&I approach, comprising an upgraded Strategic Energy Technology Plan and a strategic transport R&I agenda, with a limited number of essential priorities and clear objectives, in 2015-2016.

 The Commission will develop an initiative on global technology and innovation leadership on energy and climate to boost jobs and growth.

15. The EU will use all external policy instruments to ensure that a strong, united EU engages constructively with its partners and speaks with one voice on energy and climate.

 The Commission, with the HR/VP, and the Member States will revitalise the EU's energy and climate diplomacy.

 The Commission, with the HR/VP, will develop an active agenda to strengthen EU energy cooperation with third countries, including on renewable energy and energy efficiency.

 The Commission will make full use of the EU's external trade policy to promote access to energy resources and to foreign markets for European energy technology and services.