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ARAŞTIRMA MAKALESİ RESEARCH ARTICLE

ENERGY SECURITY POLICY OF EUROPE

Avrupa'nın Enerji Güvenliği Politikası

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ABSTRACT

The current article attempts to discuss some topical issues related to energy security in the EU against the context of the gas crisis between Russia and Ukraine in 2009. In response to this potential and existential political challenge, Europe has embarked on a process of considering alternative non-Russian sources in their procurement of natural gas resources. Essentially, this process has exposed the Caspian Sea region and particularly the immense gas fields of Azerbaijan, as potentially viable sources. From this standpoint, the purpose of this paper to develop an integrated theoretical framework for energy security concept and to shed light on the policies and strategies applied by the European Union countries to confront the challenges that faces them. The outcomes and consequences of the crisis which were resulted in finding Azerbaijan as Europe's new and alternative energy provider. Constructing energy union in EU might be the most important project in the history of the world.

Keywords: European Union, Energy Security, Energy Suppliers, Transit Countries.

ÖZ

Bu makale, 2009'da Rusya ile Ukrayna arasında yaşanan gaz krizi bağlamında AB'de enerji güvenliğiyle ilgili bazı güncel konuları tartışmaya çalışıyor. Bu potansiyel ve varoluşsal siyasi zorluğa yanıt olarak Avrupa, doğal gaz kaynaklarının tedarikinde Rus olmayan alternatif kaynakları değerlendirme sürecine girmiştir. Esasen, bu süreç Hazar Denizi bölgesini ve özellikle Azerbaycan'ın uçsuz bucaksız gaz sahalarını potansiyel olarak uygulanabilir kaynaklar olarak ortaya çıkardı. Bu bakış açısından, bu makalenin amacı, enerji güvenliği kavramı için entegre bir teorik çerçeve geliştirmek ve Avrupa Birliği ülkelerinin karşılaştıkları zorluklarla yüzleşmek için uyguladıkları politika ve stratejilere ışık tutmaktır. Avrupa'nın yeni ve alternatif enerji sağlayıcısı olarak Azerbaycan'ın içinde bulunduğu koşullar önem arz etmektedir. Avrupa Birliği içerisindeki enerji birliğinin oluşumu Dünya tarihi içerisinde önemli bir projedir. O nedenle çalışma daha ziyade Avrupa-Azerbaycan hattı üzerinden enerji aktarımının jeo-politik önemine odaklanmıştır. Takdim üzerinden analiz yapılacaktır.

Anahtar Kelimeler: Avrupa Birliği, Enerji Güvenliği, Enerji Tedarikçileri, Geçiş Ülkeleri.

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INTRODUCTION

For quite a long time flammable gas was not an issue of significant concern. Aside from quarrels between the First Reagan Administration and European leaders about expanding reliance of Europe on (at that point) Soviet Natural gas, energy when all is said in done had an amazingly low profile in the period between the oil costs and the mid-2000s. This changed when Ukraine and Russia couldn't illuminate a value question, and the previous chose in January 2006 to hold onto the provisions of gaseous petrol to the EU. (Boersma, 2015)

Given the recent events taking place in the world, most countries have started to examine the security of all facets of their policies that also involve energy protection. Energy security in itself means that the national energy market should have reliable access to the supply of energy at stable and affordable prices. Being "energy secure" nowadays indicates a country should be in a position to respond to major disturbances and have a contingency plan. While the purpose of energy security traditionally was to manage how oil supply is distributed, it emerged in 1973 as a political reaction to the Arab oil embargo. After the embargo, the monitoring and analysis of energy policies improved as well as the coordination of urgent sharing of supplies in the event of an emergency. In 2007, EU leaders introduced "Energy Policy for Europe" which is the three-stage plan concentrating on energy stability, supply protection and sustainability. However, this approach was not endorsed as anticipated, and hurdles remained to reaching a shared energy security. The issue was linked to many Member States' inability to move their control to EU level as the energy sector is one of the key prerequisites for economic development. However, since 2007 the EU and member states have strengthened this partnership and established more common interests in energy resource sharing, as it became clear that otherwise they would not achieve energy security.

Since 2010, one trend is obvious that if the EU internal energy system does not operate adequately, obtaining equal and efficient distribution of supply would be impossible. For instance, while the EU has plenty of gas supplies at its fingertips, it still can not flow freely and this is the explanation for the poor and weak reaction to disturbances. It was obvious from the studies and findings at that time, the EU was unable to resolve critical issues at hand. The European Commission adopted "Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy' in 2015. The key emphasis of this strategy was on achieving sustainable, competitive, affordable energy for every European.". The key objective was to include cross-border cooperation, incorporate energy security, and develop research and innovation projects as well. Nevertheless, the previous problems regarding the attitude of EU member states towards shared energy protection remained as it ever was. The previous problems regarding the attitude of EU member states towards shared energy protection remained as it ever was. In summary, the EU institutions agreed to terms on an updated gas supply security law, a revised electricity security law, a focused revision of the gas directive to extend its core provisions to pipelines with 0.33 countries, and furthermore new targets for power production and renewable energy by 2030. Meanwhile, EU common interest projects (PCIs) are financially supporting

energy infrastructure that establishes interconnection and retains security of supply. Furthermore, more EU people currently expect the EU to expand its participation in energy security and the reliability of gas supply. This expectation was shared by just 52% of EU people in 2016, although it has presently risen to 65%. In line with expectations, there will be an energy shift from the traditional centralized generation system that has been driven by fossil fuels in national security towards the new system that will be characterized by a high proportion of renewables as well as more regional development and cross-border markets. The EU will remain in a key position in the transition and will control security of supply. However, in case of direct intervention in determining the energy supply of the Member States, the EU would have to use a special legislative procedure that will require unanimous decision-making in Council and a consultative role for the Parliament. As is evident from the details given above, energy security is an important policy area for the EU and, despite the signing of numerous treaties over time, there are still problems that need to be resolved. This research will focus on providing broader data and information about these issues, evaluating patterns in cooperation and providing long-term recommendations for enhancing energy security.

METHOD

The research paper uses Regional Security complexes theory which tries to clarify the untraditional security aspects, through expanding its scope by adding new dimensions such as partnership rather than military perspective. Energy security has been taken as an independent variable while challenges/major threats and opportunities are dependent variable to Energy Security of Europe.

COOPERATION TRENDS

The joint energy policy of the European Union has always been a subject of great contention. In recent years, attempts for a joint strategy have begun to take on greater significance to ensure the energy security of the Member States. During this long period, though, many difficulties are increasing due to the varied interests and energy requirements of the countries. Fossil fuels, such as coal, gas, and oil, form the main part of the European Union's energy consumption. However, due to the lack of resources, there is a high demand for the import, which leads to the member states' dependency from the exporting countries. Due to substantial declines in gas production in Europe in recent years, the European Union's largest export partner (Russia) seems to remain one of the most important players in energy security. Given the presence of entirely reliant countries in the EU, diversification of energy supply sources and secure flow of constant energy into Europe is required. The most crucial projects in this context are the Nord Streams, the Turkish Stream and the Southern Gas Corridor which formed the current picture of European energy security policy. To analyze essential elements of EU-Russia cooperation it is important to review in detail the above listed projects.

The Nord Stream pipeline was constructed to allow direct gas supply link between Russia and Europe. The gas flow comes from Vyborg, Russia to Lubmin near Greifswald, Germany from where it enables to supply the European gas consumption. The twin pipeline system consists of 1,224 kilometers of offshore pipelines and has a capacity of approximately 27.5 bcm of natural gas (Pipeline) annually. The pipeline

affects the territories of Russia, Finland, Sweden, Denmark and Germany. Nord Stream II project agreement building brought another step into the current ties between Europe and beyond. Russia has also played a prominent role in this project as a key collaborator. The Nord Stream II targeted to double capacity of previous project and would be able to supply 55 billion cubic meters of gas annually. (Erbach, 2016). Although there have been multiple opposite sides against realization of this project within the European Union, the project was implemented successfully. The construction of a pipeline, called the Turkish Stream, which would link Russia with Turkey, has been another key problem of European energy security. European energy stability has reached another crucial landmark with the agreement on Turkish Stream. The pipeline's strategic objectives for the European energy market are close to those for Nord Stream: bypassing Ukraine and expanding the EU's energy reliance. The project has a major effect on the Southern Gas Corridor project backed by the EU, which is intended to improve diversification.

Internal issues in the area of EU energy security policy have been and still are important principles. From the beginning of the Nord Stream intense disagreements broke out between the European states as we look at strategies and discussions behind Nord Stream projects. The conflict of interests revolved around the main issue of whether or not the Nord Stream presents a danger to European energy stability. Many member states saw it as an opportunity to diversify and as a way to get extra supply. Nevertheless, the status of transit countries, such as Ukraine and Belarus, was the critical point in the supporting arguments. Most of these counter arguments against the project moved mostly in two scenes. Initially, building a Baltic-sea pipeline could pose significant environmental concerns. Countries such as Sweden, Denmark and Estonia have been worried about the problem of chemical weapons left behind on the sea-bottom from World War II and the potential destruction of the natural environment (Cameron, 2007). Secondly, the Nord Stream project raised security policy issues. Poland and the Baltic countries raised their concerns, whose energy dependency from Russia would significantly increase with this project, in addition to their lost income from the transit fees. In case of Nord Stream II, there were also contradictions within the EU member states. It was regarding whether common strategy of the EU is actually compatible with these projects.

Different opinions exist among scholars if it is realistic future goal for the EU member states to become less dependent on Russian gas supply. Statistics show that the energy demand of the EU countries will increase in the following decades. This means that despite the endeavors to mitigate the dependence, the growing need for energy supply and the investments of Gazprom in Europe shows no way out of this mutual dependency. The rising security dilemma could be decreased by the EU with proportional institutional and legal reforms on energy policy, which would enable for the member states to develop a common energy strategy based on solidarity and unity.

EU ATTEMPTS TOWARD ENERGY SECURITY

The abundant amount of supply of energy is important for the European Union's prosperity and security. Considering the crucial fact that citizens in most Member States have not had to experience any lasting disruption of their energy supply since the oil

crises of the 1970s' is a representation of the success of the Member States and the EU in guaranteeing this. However, as mentioned above, in the winter period of 2006 and 2009, the EU citizens in some of the eastern Member States areas were strongly affected by the temporary disruptions of gas supplies (Comission, 2014) After that, different measurements and regulations were implemented to strengthen the EU's energy security in terms of gas supplies and to diminish the number of Member States that are exclusively dependent on one single supplier. Consequently, to avoid shocks and disruptions to energy supplies in the short term and to reduce the dependency on particular fuels, energy suppliers, and routes, it is important for the EU Member States to execute the hard-headed strategy for energy security which promotes resilience to these problems in the long-term.

In modern days, the EU is the only major economic actor producing 50% of its electricity without greenhouse gas emissions. It is significantly important for the EU to move to a competitive, low-carbon economy which reduces the use of imported fossil fuels in the long term. By the European Council, Member States need to collectively prepare and implement prolong plans for competitive, secure, and sustainable energy, as talking this issue will require flexibility, capacity to adapt, and change.

One of the main issues that needed to be taken seriously is the promoting and strengthening the EU energy security through diversification of supply routes, which includes the construction of new routes and lessen the dependency of EU countries on a single supplier of natural gas and other energy resources.

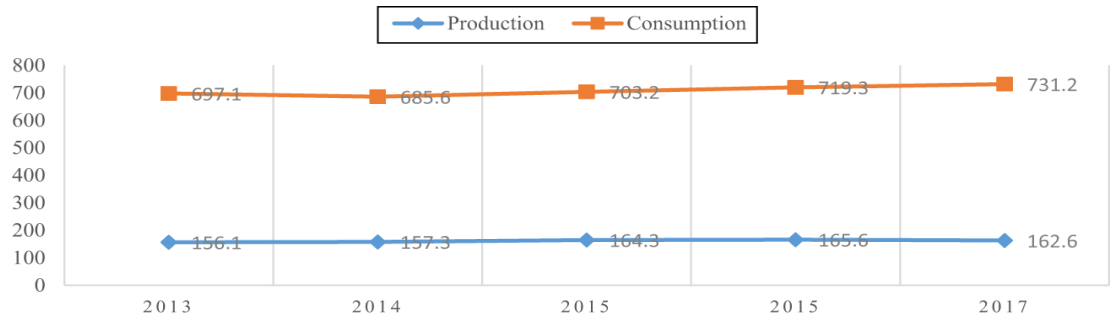
In order to diversify the routes of supply and the supplier base, EU developed different initiatives as part of its emerging energy diplomacy. One of the first attempts of EU to diversify its energy sources and to secure energy supply was *Nabucco pipeline project*. This project is one of the early projects designed for connecting Caspian Sea and Middle East regions with Europe. The route of pipeline was as following: Georgia, Turkey, Bulgaria, Romania, Hungary, and end point was Austria (Baumgarten) and the length of pipeline was approximately 3300 km. It was planned to supply 31 bcma gas to Europe. However, it was in question that who will fulfill the pipeline with that huge amounts of gas (Azerbaijan could only supply half or it), and the rest of sources (Iran, Iraq, Turkmenistan) could not supply at that moment because of sanctions or internal issues (Russian dominance on Turkmenistan). Moreover, financing of the project was another obstacle for the project, since such a risk cannot be taken if there were no reliable supplier. “Second main obstacle to the project comes from Russian antagonism. Russia has been employed and will continue to employ divide and rule tactics through invitations to Nabucco’s allies to participate in rival pipeline South Stream project”. Taking all those obstacles in account, EU could not implement that project in the way of securing its energy supply (Erdogdu, 2010)

Other projects of European Union, such as Nabucco-West, South East Europe Pipeline (SEEP), Interconnector Turkey-Greece-Italy (ITGI), and Trans Anatolian Pipeline (TAP) were planned to fulfill EU energy demand via different sources. During evaluation process of the projects from different perspectives (commercial, technical, financial), TAP project was selected as the best option. Nabucco-West pipeline’s length was planned 1300 km, whereas the length of TAP pipeline was approximately 800 km,

so shorter pipeline means lesser costs. When it comes to SEEP pipeline, "*The SEEP would still anger Russia because of its direction and the future threat it could pose to the Gazprom-dominated markets*" (Soltanov, 2012) Because of not to draw anger of Russia over Azerbaijan, the decision was in favor of TAP to supply gas to Europe via southern direction.

CHALLENGES AND MAJOR THREATS TO ENERGY SECURITY OF EUROPE

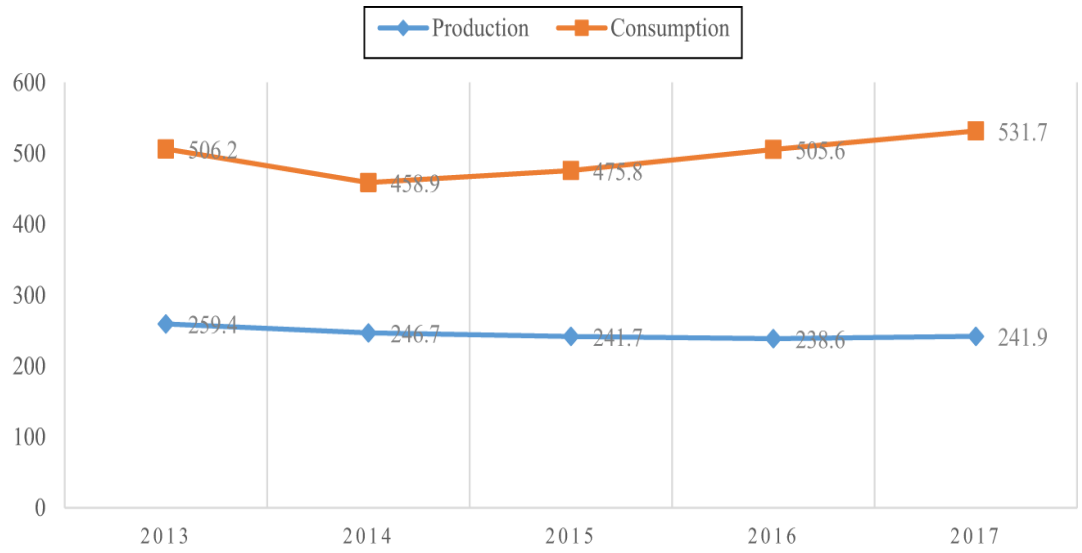
The first challenge for energy security of Europe is that domestic energy resources are not sufficient to meet the internal energy needs. The gap between domestic production and consumption was quite considerable in 2017, when analyzing certain graphs.



Source: Own elaboration based on British Petroleum, 2018 Statistical Review 2018

Figure 1: Europa Energy Production and Consumption.

Crude oil production was only 162 million tons, while consumption of crude oil was 731.2 million tons (British Petroleum, 2018, p. 16-17). In this regard, domestic production met only 22.2 % of production. At the same year, European Union`s gas production was 241.9 BCM and consumption was 531.7 BCM (British Petroleum, 2018, p. 28-29).



Source: Own elaboration based on British Petroleum, 2018 Statistical Review 2018

Figure 2: European Union's Gas Production and Consumption.

This number indicates that domestic production of natural gas meets less than 46 % of internal consumption. Accelerating domestic resources to achieve self-sufficiency is challenging process since the contribution of the European continent to global energy production equation is the smallest. Internal energy production over the past decade has been following a declining trend of about 15 percent reduction between the years 2001 and 2012. Internal gas production has even lost 25 BCM over the years 2013-2019 and Europe took 5th place by 241.9 BCM in terms of natural gas production. In contrast, North America (951.5 BCM), Russia and Central Asia (815.5 BCM) performed much better than European continent (British Petroleum, 2018, p. 28). In 2017, European oil production was amounted to 162. 6 million tons, which is very limited amount in comparison to Middle East (1481.1 million tons), North America (916.8 million tons) and Russia/Central Asia (699.6 tons) (British Petroleum, 2018, p. 16,). As a result, dependency on imports has been growing for member states.

The second challenge for energy security occurs due to limited European influence over international prices of energy items. European Union is accountable for only 13% of global energy consumption which equals to 7% of the world population; however, the US with 18% and China with 22% consumption have dominant powers on energy prices. Statistical predictions reveal that between the years 2011 and 2035, energy demand in Europe will decline about 7% which will lead to a downturn in the weight of Europe on global energy market.

In terms of global reserves, European countries contribute very small amounts. Natural gas reserves were about 104.5 TCF (only 1.5%) in 2017, which is very poor rate compared to Russia (18.1%) and Qatar (12.9%) (British Petroleum, 2018, p. 26). Europe`s crude oil reserves amounted to only 0.8% of the total world reserves. With regard to hydrocarbon reserves, European countries also face shortages.

Additional challenge is related to limited number of suppliers. In 2016, 82% of the natural gas imports were from only 4 countries Russia (40.2%), Norway (24.9%), Algeria (12.1%), Qatar (5.5%), and 17.3% from the rest of the world (Eurostat, 2017). In this sense, Baltic countries, Finland, Slovakia and Bulgaria are dependent on only one supplier (European Commission, 2014, p. 8). Moreover, two-third of oil imports was from 5 countries: Russia (32%), Norway (12%), Saudi Arabia (8%), Nigeria and Kazakhstan (7%) per each. In terms of solid fuel imports, mainly coal, more than 3 quarters are imported from only 3 countries; Russia (30 %), Colombia (23%) and Australia (15%). Besides this, the number of transit countries are also limited who transport imports from foreign countries. As an instance, natural gas supplies from Russia are imported via Ukraine and Belarus as transit countries. This dependency makes Europe vulnerable to problems in foreign partners such as EU energy sector has dramatically suffered from crisis between Russia and Ukraine. All in all, supply disruptions represent a serious risk to European energy security. This trend is real threat to Europe since if any domestic, geopolitical, environmental, or technical problem occurs in regarding these suppliers, then European energy security will definitely face shortages and severe crisis.

Additional challenge for European energy security may happen due to bio fuel substitution of oil. European Council has decided to increase renewable energy in

transport to 10% by 2020 which will improve security of oil supplies since oil which is mainly used for transport will be substituted with renewable energy. Moreover, the use of renewable energy will reduce greenhouse gas emissions; meanwhile, bio fuels have kind of disadvantages; It will lead to the destruction of natural habitats as deforestation and will harm ecosystem`s equilibrium. Additionally, Europe will need to import about 50 % of the bio fuels since reserves are not self-sufficient (Behrens, 2008) which in turn will result in inefficiency. Additionally, the research related to bio fuel sphere is limited, and technology for second generation bio fuels as gas-to-liquids, coal-to-liquids and electricity to fuel is too costly (Jesse & van der Linde, 2008).

POLICY SOLUTIONS FOR FURTHER DEVELOPMENT

Since solidarity between Member States is a principal characteristic of EU membership, preserving energy security is a joint issue of EU rather than dispersed national states. Bolstering energy security in Europe requires substantial international coordination supported by wide range of policies and actions. In order to secure its energy interests, EU needs to advance an effective external energy policy, define infrastructure of basic importance to its energy security and follow strategic actions to boost its partnership with key energy suppliers and transit countries. 2nd Strategic Energy Review propounds numerous infrastructure developments as energy security priorities of EU Community. These plans can be considered as EU response to potential challenges which can be faced between 2020-2050.

Initially, EU should intensify its linkage with Baltic region; both Nordic countries and Baltic countries. Baltic region and EU have better opportunities to enhance their energy security through close cooperation rather than individual operation. Baltic Interconnection Plan which was adopted in 2009 was a beneficial initiative for building up a secure and diverse energy supply for the region and elucidating key infrastructures for the effective interconnection of EU with Baltic Region. Secondly, EU should attain sufficient LNG (Liquified Natural Gas) capacity and availability for all members on the basis of solidarity arrangement. It is especially necessary step for member states which overwhelmingly depend on one single supplier. EU may reconsider its approach to gas producers and exporters in the Central Asia and the Caucasus. Qatar which is the global leader in gas exports as well as smaller exporters such as Nigeria, Australia, Tanzania, Mozambique and Israel could become essential partners. The EU may, likewise, decide to import more LNG from the Americas, by the help of Canada-Europe free trade agreement and US Transatlantic Trade and Investment Partnership (TTIP) negotiations creating key opportunities (Dreyer & Stang, 2016, p. 3-4). Subsequent strategy of EU should be consolidating partnership with Russia and make it more stable. If all European countries can establish strong energy relationship with Russia, EU would not have to deal with significant energy security problems. Considering the fact that in 2018, approximately 40% of EU natural gas imports came from Russia, and similarly Gazprom supplied 200.8 billion cubic meters of gas to European countries, it would be strategically right step to preserve mutual dependence in energy relationship (Pedersen, 2014)

In order to bolster and sustain energy security, a 2030 Climate and Energy Framework was acknowledged by the European Council in October 2014. This

framework intends to help EU attain more secure, competitive and sustainable energy system by enhancing share of renewable energy and increasing energy efficiency. Their fundamental targets are to collectively achieve at least 32% share for renewable energy and 32.5% improvement in energy efficiency by 2030 (European Commission, 2018). This framework will guarantee certain forward movements regarding with energy security. It will help to establish an energy system which provides affordable energy for all consumers, improves security of EU's energy supplies and diminishes their dependence on energy imports. In order to meet these targets EU admitted "Integrated Monitoring and Reporting Rules" to guard progress towards 2030 targets. Moreover, Member States are supposed to adopt National Energy and Climate Plans (NECPs) for 2021-2030 years (European Commission, 2018).

RESULTS AND CONCLUSION

The outcomes and consequences of the crisis which were resulted in finding Azerbaijan as Europe's new and alternative energy provider. Constructing energy union in EU might be the most important project in the history of the world. Namely, energy union of EU is supposed to be responsible for ensuring safer, more efficient and available energy network for the citizens of union. Energy Policy for Europe includes further long-term objectives, perspectives and vision for 2050. Considering the fact that demand-supply balance in oil industry will become exceedingly tight in the long run as a result of growing demand and declining production, EU has set out essential steps in its agenda. Initially, they plan to break or decrease transport's dependence on oil by shifting to electric, hydrogen and alternative fuel cars. Surely, it will require certain actions such as tax breaks for purchasing greener, hydrogen and biomethane vehicles. Subsequently, it is planned to decarbonize EU electricity supply by 2050. This is a challenging step; however, it will be necessary if EU performs its responsibilities to reduce greenhouse gas emissions by 2050 to impede climate change. If strategic investments are taken quickly, around two-thirds of EU electricity generation will be less carbonized in early 2020's (Commission of the European Communities, 2016, p 15-16). Following objective of EU is to establish collective principles to define zero, low carbon and energy buildings in order to increase their number in the long run. The reason is that 40% of the final energy is consumed in buildings in today's world. They intend to redesign buildings in such a way that they no longer consume more energy than they are able to produce. Last objective of EU Energy Policy is to promote highly efficient and low carbon energy system all over the world and multiply beneficial effects of European energy agenda for 2030/2050 by persuading rest of the world to follow them.

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