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**THE STATUS OF RENEWABLE ENERGY RESOURCES IN
EUROPE AND COMPARISON OF TURKEY**

Energy is one of the basic needs of human beings during their historical development. However, with the opportunities provided by nature, the need for energy resources in nature continues to increase day by day. In less developed countries, consumption increases with only population increase; in developing countries, energy supply will continue intensely in the near future as a result of industrialization, increasing people's income level and technological developments. It is an undeniable fact that fossil energy sources, which are called as non-renewable energy sources, cause serious environmental problems in the world, especially in

Europe, that their reserves will be depleted between the years 2050-2100, and that interest in renewable energy sources starts to increase as a result of fluctuations in prices.

As seen on a global scale, the energy supply is an important issue for the European continent. Although the importance of energy for the European continent emerges as a result of the use of the industry and industry as a basic element within the scope of economic activities, it is seen that when the European Continent is evaluated in terms of energy diversity, 20% of the renewable energy resources can only be used. Intensive and diligent studies on renewable energy sources for our country show parallelism when compared to the European Continent, but the increasing population and industrialization in our country have increased the consumption of energy resources. Our country starts field studies with the effort of finding new fossil energy resources and also works on the importance, sustainability and supply of renewable energy sources.

In this review, the potential and importance of renewable energy sources for the European Continent are presented. In addition, comparison has been made of Europe's energy production and consumption data with Turkey. Studies on the diversity of renewable energy sources of our country are included.

The type of power required in the time frame we are in the world consists of fossil fuels, which are non-renewable power sources. However, these references provide strategic importance on behalf of the states in which they are heavily present, since they cannot be produced continuously and that it takes too long to reappear. For this reason, states include various strategic moves in their production and consumption. These non-renewable resources: 1) Coal; 2) Oil; 3) Natural gas

Renewable energy sources are wind energy, solar energy, hydroelectric energy, geothermal energy and hydrogen energy.

If we look at the reasons for the countries to return to renewable energy sources; With the onset of the industrial revolution, serious increases in the use of non-renewable energy sources have started and research in the field of non-renewable energy sources has gained momentum. Following the use of coal in the industrial revolution, the use of oil and natural gas, which are more efficient energy sources than coal, was also started. European countries and other countries of the world have established and intensified their policies on oil. As a result of the

concentration on oil, disagreements between states started to emerge and conflicts of interest emerged in terms of obtaining resources. Among the reasons for this situation occur; countries trying to obtain their own energy easily and want to take control of the roads to energy.

Even though a significant portion of the power references consumed in the EU are met by non-renewable power sources, the decline in the course of years continues. Non-renewable power references, the shares of which decreased in power supply, were replaced by increasingly renewable power sources. It is observed that the energy resources savings, which cannot be renewed in energy consumption in European countries, has decreased by ten percent in the last two decades. Among these decreasing quantity reasons; Increased use of renewable power sources and economic structural changes. Thanks to energy attitude and progressive use of renewable power reference, the course of decreasing nationality towards non-renewable energy sources is observed. In the last two decades, the size of renewable energy sources in energy consumption has shown an increase of seventeen percent, and the use of ongoing renewable power sources reduces fossil energy reference use and externality, thereby reducing the bad result given to the environment and achieving greenhouse gas release goals.

Energy Consumption in the European Union; Based on 2016, oil consumption in European countries is 34.4%, natural gas consumption is 22%, coal consumption is 16.2%, nuclear energy consumption is 13.6%, renewable energy consumption is 13% and energy consumption from waste is 0%. Was realized at the rate of 8. Considering the power references in European Countries, it is seen that the majority of consumption is in oil and it is determined that the share of renewable power references in consumption is increasing.

When the consumption amounts in the energy field in European Countries are evaluated on a sectoral basis, it is seen that it is used mostly in the transportation sector and the least consumption is in the field of agriculture and fisheries.

The Importance of Renewable Energy Sources for Europe;

Renewable energy sources are known as an important value since energy consumption is high in developed countries as in many countries in European countries. The values of these resources are increasing day by day and are becoming more and more important for the coming years. Still today, once again, most of the energy consumed is from fossil fuels

that are non-renewable energy sources, and the rest is from nuclear energy and renewable energy sources. If the energy consumed from fossil sources is not taken for humanity in the coming period, it will bring many problems afterwards. It is inevitable that these problems cause immense losses that are not compensated for future generations. It is a known fact that fossil resources are decreasing gradually and they are known for their environmental damage. Therefore, since this table is now important, it has become apparent that the use of renewable energy sources is less than the other energy group.

Importance and Future of Renewable Energy Sources in Turkey; to promote renewable power reference by Turkey and to increase the shares between renewable power and power supplies to diversification of the power reference, to reduce the nationality to foreign reference and ensure energy supply security in this sense is very important. Energy progress can be experienced in the power sector in Turkey at this point is the transmitter of happiness. Considering the current capacity of renewable power and the calculated total potential, Turkey is more likely to meet the future goals. When these purposes in 2023 Turkey's electricity power to request at least 30% of which (including hydropower) is aimed to be supplied by the power energy references. In order to realize this aim, it is foreseen to make 60 billion dollars deposit in the approximate renewable power references. Turkey achieve its 2023 objectives in the field of renewable power and renewable power to make all these goals is to improve the existing deposits *zorunda*. Briefly *tüketil* the year 2023 an estimated one-third of the total power in Turkey (3.1) is expected to be obtained from renewable power reference. In order to meet these goals, great importance should be given to wind and solar power and electricity production.

As a result, the development and use of technologies for renewable energies is important for our future. Renewable energy sources are inexhaustible and have the potential to meet the energy needs of the entire world population. In addition, renewable energy sources minimize the potential for environmental damage. Since the renewable energy source is a domestic natural resource, it is always available. It is an obstacle for energy importing, especially for the states that import the important branch of power requirement from the foreign market. In this respect, renewable power; it has a very important flair in that states fulfill their power requirements on their own. approximately 70% of power like the

power of Turkey is very important to typing a reference to the state from outside the area. In addition, current references should be efficiently consumed in terms of sustainable power use. At this point, renewable power undertakes a significant show in terms of domestic and clean power generation. Care should be taken to design the renewable power sector within the framework of international rules and regulations. In order to cover the changes in the renewable power sector, it is beneficial for each country to make laws on its behalf by following the legal regulations and advances in states such as Germany, Denmark and China. In particular, pricing within the scope of renewable power stable price assurance needs to be raised to higher levels. In order to compete with these countries and to minimize the dangers that may occur in the future, the investments in renewable power sources in Europe are increasing day by day, and in order to compete with other energy references, the profitability of the renewable power sector should be increased.