EPPAM NEWSLETTER

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ENERGY SECURITY PROJECT

EPPAM conducts a research project titled "Institutional Network and the Process of Decision Making in Energy Security Politics in Turkey" in cooperation with the Vytautas Magnus University Energy Security Research Center.

Within the scope of the project, it is aimed to determine the factors, individuals and institutions that are effective in determining the energy security policy of Turkey and to contribute to determination of the relationships and according to these determination of the energy security policy

The project will be adapted to Turkey after it has been implemented in Lithuania in the previous years by the relevant center and will be made in the process by conducting various interviews and meetings with related persons and institutions after the preliminary research.

The project, whose results will be shared with related people and institutions on energy, will also contribute to the development of thematic cooperation between the two countries.

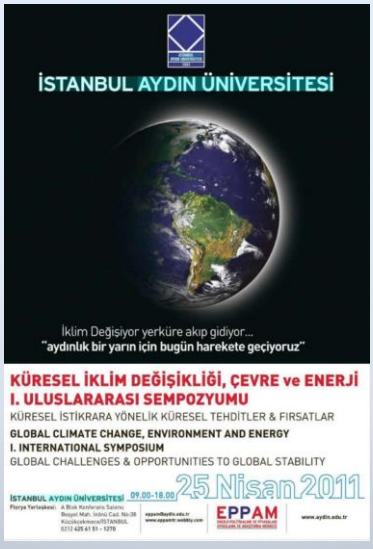
Contents

BOOK ON ENVIRONMENTAL SAFETY

EPPAM Director Assist. Prof. Dr. Filiz Katman will be the editor of "Environmental Security" chapter in the book titled “The Palgrave Encyclopedia of Global Security”. In the relevant part of the book, the factors affecting environmental safety will be handled by related authors.

INTERNATIONAL CONFERENCE ON REGIONAL COOPERATION IN THE BLACK SEA: OPPORTUNITIES AND THREATS

EPPAM Director Assist. Prof. Dr. Filiz Katman made a speech titled "Current Threats in the Black Sea" as an invited speaker at the international conference titled "Regional Cooperation in the Black Sea: Opportunities and Threats " which is organized by Istanbul Aydın University in cooperation with Dimitrie Cantemir International University on 7 April 2017.



EPPAM AT PRESS

EPPAM DIRECTOR ASSIST. PROF. DR. FILIZ KATMAN

TGRT NEWS - 12:00 News – 7 April 2017

OP-ED: THE 2040 PROJECTIONS ON THE SUPPLY AND DEMAND OF THE ENERGY RESOURCES

Nizamettin Temer, PSIR 3rd Year Student

First of all, energy is one of the most important elements of social and economic development. Along with technological advances all over the world, the continuous increase in demand and expectations naturally increases the demand for energy. It is extremely important that the energy can be met at reasonable prices, uninterrupted, good quality and in sufficient quantity. Rapid industrialization, urbanization and population growth energy consumption in developing countries is increasing today.

So, global energy demand is expected to increase by 30% in 2040 according to International Energy Agency (IEA). It means an increase in consumption for all modern fuels. But still cannot transfer electricity to the Africa. It is still without access to electricity in 2040 (down from 1.2 billion today). Around 1.8 billion remain reliant on solid biomass as a cooking fuel (down by a third on today's 2.7 billion); this means continued exposure to the smoky indoor environments that are currently linked to 3.5 million premature deaths each year.

Consumption of natural gas fossil fuels is shown as the best. Natural gas consumption will increase by 50%. Growth in oil demand slows over the projection period, but tops 103 million barrels per day (mb/d) by 2040. Coal use is heavily influenced by environmental concerns, and growth is mainly driven by the rapid growth of recent years. The increase in the nuclear power plant has mainly been effective in China. With the total demand in the OECD countries declining, global energy consumption continues to shift to industrialization, urbanization in India, Southeast Asia and China, as well as Africa, Latin America and the Middle East.

According to the IEA, there is a need for a cumulative $ 44 trillion investment in the global energy supply; 60% of them are oil and gas and coal extraction and supply, including power plants using these fuels, and about 20% are going to renewable energy. An extra $ 23 trillion is needed to make energy efficiency improvements. Compared to 2000-2005, when nearly 70% of the total supply investment goes to fossil fuels, this key represents a significant redistribution of capital, as it expects the cost reductions for renewable energy technologies to continue. The main warning that the fuel and gas investment shifts to higher levels is the decline in production in existing areas. The relationship between electricity supply and production capacity in the electricity sector is changing.

Despite the weakness in the global energy market and the slowdown in China's growth in energy demand will increase in line with growth in the world economy will continue in the next 20 years and beyond. According to the "BP Energy Outlook 2016" report, global energy demand is expected to grow by 34 percent in total with an increase of 1.4 percent on average between 2014 and 2035. This rise in overall demand also involves

significant changes in the energy mix; Lower-carbon fuels will grow faster than carbon-intensive fuels, while the world will begin a transition to a lower-carbon future.

The "BP Energy Outlook 2016" report predicts that despite rapid growth in other sources, fossil fuels will continue to be a dominant type of energy in the period up to 2035, accounting for 60 percent of the expected increase in demand and 80 percent of the world's total energy supply in 2035. Gas will be the fastest growing fossil fuel with an annual growth rate of 1.8 percent, while the oil will continue to grow at a stable rate of 0.9 percent per year despite the ongoing decline in its share of the energy mix. With a sharp slowdown in the growth of coal consumption, the share of the cow energy mix will fall to the lowest of all times until 2035, and the second largest source of fuel will leave the ranks untouched.

In the next 20 years, it seems that energy demand will continue to grow in parallel with the need for more energy to power the expansion and rising levels of activity in the world economy. The main forces behind rising demand are income and population. By 2035, it is expected that the world population will reach about 8.8 billion and add 1.5 billion people to the number of people who need energy. In the same period, it is predicted that GDP will increase by two quartiles and half of the projected increase will come from China and India. While the strong growth in emerging economies has strengthened oil demand, China and India will come from more than half of the world's demand increase, with the number of vehicles on the world surpassing today's double.

According to the "BP Energy Outlook 2016" report, natural gas supply is showing robust growth due to the strong increase in world rock gas production, which is expected to increase by 5.6 percent per year. Rock gas will have a 10 percent share of total gas production in 2014, nearly 20 percent in 2035.

Global liquid fuel supply will reach around 19 million barrels per day by 2035, mainly due to the increase in the supply of non-OPEC member countries. OPEC is expected to take action to maintain its market share of around 40 percent.

Renewable resources in 2035 will provide a quarter of global primary energy growth and more than a third of global electricity generation growth. The energy demand in the EU in 2035 will return to its level 50 years ago, although the economy is almost 150 percent larger. Until 2021, the United States will be generally energetic and until 2030 will be self-sufficient in oil.

Until 2035, China will pass the United States as the world's largest oil consumer, but its primary oil consumption will be only 27 percent of the US. The growth in global gas consumption between 2014 and 2035 will be more than the sum of the current gas production of the US and Russia. By the year 2035, coal will have the lowest share since the industrial revolution, providing less than 25 percent of the primary energy.

China will increase renewable electricity capacity more than the sum of the EU and the US in the period covered by the "BP Energy Outlook 2016" report. The new refineries planned for the next five years with idle refining capacity will meet growing demand for crude oil in the period covered by the "BP Energy Outlook 2016" report.

The energy demand in the world is expected to grow by 1.4% between 2014 and 2035, and 95% of this growth is expected to come from countries that are not OECD members. Global energy intensity (ratio of energy demand to GDP) is projected to increase by 2.1 per cent annually in this period. This will be the 20-year period in which we see the fastest increase in history since our data collection began in 1965.

Gas is the fastest growing fossil fuel (1.8 percent per year), followed by oil (0.9 percent per year). The growth in coal will record a sharp slowdown (0.5 percent per annum), significantly below the 20-year average growth rate (2.9 percent per annum).

Renewable resources (including biofuels) will increase about four times during the forecast period (+ 285 percent). By 2035, they will provide a quarter of the primary energy growth. The share of non-fossil fuels in the global primary energy of 14 percent today will rise to 21 percent by 2035.

In conclusion, daily global liquid fuel demand (oil, biofuels and other liquid fuels) will increase by about 20 million barrels a day to 20 million in 2035. More than 60 percent of the growth will come from transport. Asia's share of oil imports across all regions will increase by about 64 percent compared to today and rise to about 80 percent by 2035.

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