

# SYNERGY

Bilkent Energy Policy Research Center Newsletter



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## If Solar Will Be the King, Future is...

Last week IEA published its annual report on global energy markets and developments. There were lots of good points to discuss, but I would like to focus on the promise of solar. If solar will be the king's world's electricity markets, what should electricity markets look like?

The first point is the role of the consumer. Every single electricity future report claim that the consumer is the key. The consumer is the key for sure. The whole electricity system was designed around the consumer. Consumer demand was the most important player in the whole electricity system to be forecasted every day until the mass penetration of renewables. The system responds to consumers, but consumers do not respond to the system effectively.

For some years, we were discussing the competition. But competition is bifacial. If there is competition on the supply side, there should be some competition or rationality on the consumer side. In the past consumer was the key since the whole system was a servant to the consumer. Now the consumer is the key to bring some flexibility to the system.

Then we have the smart grid discussions. Smart is a concept that has been a byproduct of a technocratic age. It is no longer just-unjust, efficient, effective, well planned, or lean grid, but a "smart grid" offering answers to our questions. No more dumb grids but smart grids. In that sense, attributing solutions to smartness is a bit of generalization and an escape route from more fundamental discussions.



Then comes the merit order problem. Further, we move upwards in the meritocratic cost curve, the control function of any resource increases. The lower end is more like a less controllable technologies' territory, where the higher end is the kingdom of highly controllable resources, such as the demand side.

Then we bring solar into the picture. With solar comes great responsibilities. But what if the whole picture is redesigned with solar in the center. In the past, thermal resources were at the center of the supply picture. The consumer was generally unrestrained. Now the consumer is to be a flexibility supplier.

We still can not answer how solar generation may compete since competition should be at the center of electricity markets. Now there are more needs for localized services and real-time analysis. The grid is not the solution to all ills, whether it is smart or dumb. Therefore putting solar at the heart of electricity markets will be tough. Like veins in the heart, it may be connected to heating elements with hydrogen or to the system through storage. So how

should be the real-time valuation of the solar generation? Probably local elements will be important this time.

This is not the first time we discuss such issues. The value of a hydro generation plant or hourly hydro generation is well investigated. The solar is, in some sense, like hydroelectricity. But the hydro generation generally benefits from higher-cost thermal generation.

To understand solar's future role in our electricity markets, we have to understand what kind of electricity market we will need in the future. If decarbonization moves from hydrogen to full electrification, the solution will be simpler. More demand load may provide more flexibility. Still, we may be sure that there is no solar future without wasting solar, whether it is hydrogen or storage. As the throne is transferred from king coal to king solar, we may need to overbuild. Overbuilding requires less competition. But does it matter if the costs are technologically in a downward spiral?

Bariş Sanlı

## Oil Fund Supports Norway's Economic Stabilization

Norway is the model country for handling oil revenues and distributing it to society. In 1990, the government established the Government Pension Fund Global or the Norwegian Oil Fund, as we know. Starting from 1996, the fund began investing in foreign countries. Today, the fund reached \$1.1 trillion or, in other words, \$200,000 per capita.

Behind this policy, there was a social awareness of nearly three hundred years. Throughout history, Norwegians suffered the intervention of Denmark, Sweden, and Nazi Germany, respectively. After the Second World War, they have decided to participate more in the global affairs and joined NATO. It was the first step in preventing further foreign threats, especially from the Soviet Union, which had a border with Norway.

Simultaneously, the elected governments implemented substantial labor rights and extensive social welfare benefits while investing in industrialization. In this era, the trust in the government and desire to become an independent state helped Norwegians to want to save and invest for the future.

As the development of this mindset followed significant oil discoveries in the offshore, Norwegians prosperity increased rapidly. Instead of spending all the revenues within the generation, they have decided to reserve it for future generations. It was the major difference for the rest of the rentier states that diverged Norway.

Norwegians survived each economic crisis with minor setbacks with this policy and had a very stable current account balance. On the other hand, other countries such as Venezuela suffered huge fluctuations that impacted the social order and economy. While the Norwegian citizens' life quality increased slowly but steadily, other oil countries' citizens developed bad



spending habits when the prices high and could not afford essential services such as education, health, or safety when the prices are low.

By keeping the oil income abroad, the Norwegians also did not face a resource curse in their economy. In recent years they have also decided to invest only in the companies that are healthy for humanity and the environment. In Turkey, the Norwegian Oil Fund has shares in Turkish Airlines, Turkcell, Hürriyet, Şok Marketler Zinciri, and many other well-known firms operating in a different sector 0-4 percent on average.

Up to this year, the Norwegian government used 3-4 percent of the oil revenues in their spendings annually. In the first half of 2020, the oil companies had lost nearly 40% of their revenues due to COVID-19 and a decline in oil prices. Despite that, the Norway Oil Fund also had shares in the U.S. tech companies, which generated an additional \$41 billion in the third quarter of 2020. As a result, they managed to repair the part of the damage caused by the oil sector due to their careful investments.

Under COVID-19 circumstances, the government withdrew the record of money to finance social

services. In May 2020, they used \$37 billion, and to reach the targets, they intend to use \$12 billion for the rest of the year. Similar but smaller spending is expected for the next year as well. With the help of this money, Norway's GDP decline remained 3 percent while the rest of Europe was reaching 8-9 percent.

During this period, Norway also survived a major labor strike this month. The union, Lederne, demanded the Norwegian Oil and Gas Association to equalize the wages and working conditions between the workers operate onshore and offshore fields. The parties reached an agreement, and the strike ended after ten days. During this period, oil prices increased by 1 percent and returned to the initial level.

Overall, carefully designed long-term investment strategy with integrity and commitment of the Norwegian society helping them to survive one of the major pandemics of the history with fewer losses than the rest of the world. They are dealing with economic and social problems without creating unrest in their societies and continue to remain a good example for other countries.

## The Problem of Electricity in Serbia

More and more Serbian citizens are having trouble with access to electricity. The main reasons being price and the lack of social policies in the sector. A great number of people are face to face with energy poverty.

Energy poverty is a crucial aspect of poverty, and it's connected with limited access to modern energy services. It's usually a consequence of various energy policies, high prices of energy supply services, low and unstable incomes, health conditions, and the household's specific needs and size. The weak infrastructure and the energy efficiency of the buildings are also a factor.

Electrical energy is the main source of energy in most households, and for that reason, it best shows the consequences of energy deprivation. Electricity supply affects not only basic needs such as heating, food, and hygiene but also limits access to communications and the Internet. Therefore, the electricity supply is one of the most important factors that produce social and other inequalities. Besides, energy poverty exposes residents to respiratory and heart diseases, including an impact on mental health due to stress, low temperatures, and inability to pay bills.

According to EPS (Elektroprivreda Srbija) data, about 40% of households are late in paying the electricity. The largest segment of that 40% is people with low incomes, those to whom employers remain indebted for



wages, those who choose to pay health bills instead of electricity. Of the 60% of those who get a five percent discount due to timely payment, it is certain that there are those who pay the bills at the expense of buying food. It is worth noting that there is an 11% interest rate on those bills. According to portal 021, only in January of 2017, 141 households were disconnected from the electricity network.

As for the social policy that should work on combating energy poverty, it exists but is insufficient. The right to free energy is realized but is a negligible percentage in relation to the needs. According to some estimates, only 78,000 citizens used that right in 2018, while in 2019, about 100,000 citizens acquired the right. The state has passed a new regulation in order to please everyone who has the right to free energy. According to

it, the right to free energy sources should be automatically exercised by the users of social assistance and child allowance. However, in many cities, even a third of those on the list of social assistance beneficiaries did not receive free kilowatts.

Although a public company provides electricity in Serbia, the interests represented by this company are not public. This is shown by the situation that EPS does not pressure the largest debtors but the poorest ones. This points to the fact that it is necessary to work on rearticulating electricity as a common good. Electricity is a resource that enables our daily survival and personal development, so for that reason, we should fight to make it available to anyone.

Mihael Gubas

BRENT OIL	42.78 \$/BL	GASOLINE	6.89 ȳ/LT
USD/TRY	7.89	DIESEL	6.16 ȳ/LT
EUR/TRY	9.30	FUEL OIL	3.86 ȳ

## Oil Diplomacy Between Russia and Saudi Arabia

Russia and Saudi Arabia have importance in world politics and global economy thanks to their geopolitical location, natural resource wealth, and cooperation through membership in different kinds of international institutions and cooperation. Saudi Arabia is known for its sphere of influence in breakpoints of Middle Eastern politics, and Russia becomes prominent in shaping the processes of Syria and Libya. In addition to this, these countries are regarded as two petroleum superpowers, and their decisions are extremely important for the trajectory of energy markets. Finally, G20, OPEC, and Shanghai Cooperation Organisation are some forums/alliances/intergovernmental organizations that are actively engaged in the policy-making processes. In this context, bilateral relations, particularly points related to energy issues, between these countries matter and are worth putting under the scope. In this essay, the oil diplomacy of Russia and Saudi Arabia will be examined with reference to two phone calls that have been made between Putin and Mohammed bin Salman in this week.

Before expanding on the telephone conversation that has been held between Putin and Mohammed bin Salman, elaborating and considering the relationship between two countries over energy issues would help us. 2016 is a crucial point in this relationship. Because of this year (sidelines of the G20 Summit), Russia and Saudi Arabia embarked on cooperation in world oil markets, and they agreed on getting to grips with the global glut by limiting the output. In the aftermath of that year, non-OPEC Russia joined the OPEC's commitment to decrease oil output. In 2017, Mohammed



bin Salman stated that they are willing to persuade Russia to accept them as an alternative to Tehran. When we consider the rivalry between Iran and Saudi Arabia over different issues, we can grasp the strategical aspect of this convergence. In consideration of the allyship of Saudi Arabia and the U.S, the promotion of relations with Russia is quite remarkable. 2020 is a year, which is also important because, at the beginning of the year, Russia rejected the OPEC's request in the direction of reducing oil production. The meaning of this action was the ending of the latent partnership with OPEC. As a response, Saudi Arabia claimed to increase its supply to enlarge its market share. This move led to the Oil Price War, which was one of the most significant events in the oil market in 2020. We witnessed dramatic declines in oil prices due to the oversupply.

This week, two leaders held a phone conversation that they have discussed the conditions of the global oil market and the sustainability of stability that contribute to the growth of the global economy. This is an important development because due to the aforementioned oil price war and COVID-19 process value of the oil plunged, and the

consensus on complying with the OPEC+ agreements in reducing oil production can be perceived as a message of recovery. In the first step, until 31 July, it is planned to lowering the production by 9.7 million barrels per day (about %10 of the total supply). Furthermore, it is good to clarify that this conversation has been held after the announcement of OPEC's estimation about oil demand for 2020 and 2021 (it seems unchanged).

In conclusion, it can be said that developments in the Saudi Arabia-Russia relationship over energy issues give us some messages about the importance of compromise, commitment to the agreements, and international cooperation. OPEC+ should be a group in which countries can be organized under its umbrella and behave harmoniously in favor of global welfare. Although Russia's action in March 2020 exacerbated the problems that emerged from the COVID-19 crisis, opening the diplomacy channel for the following years is a gladsome situation. Finally, this relationship is a nice example of observing the problems that can be occurred due to the violation of agreements and consensus.

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