

SYNERGY

Bilkent Energy Policy Research Center Newsletter



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Energy Poverty Puzzle

"It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their self-interest," claims Adams Smith. The same logic may be applied to the other areas if you think this is a correct statement. It may not be from the benevolence or climate awareness of the banks or green collars that they support green projects. It is all down to self-interest.

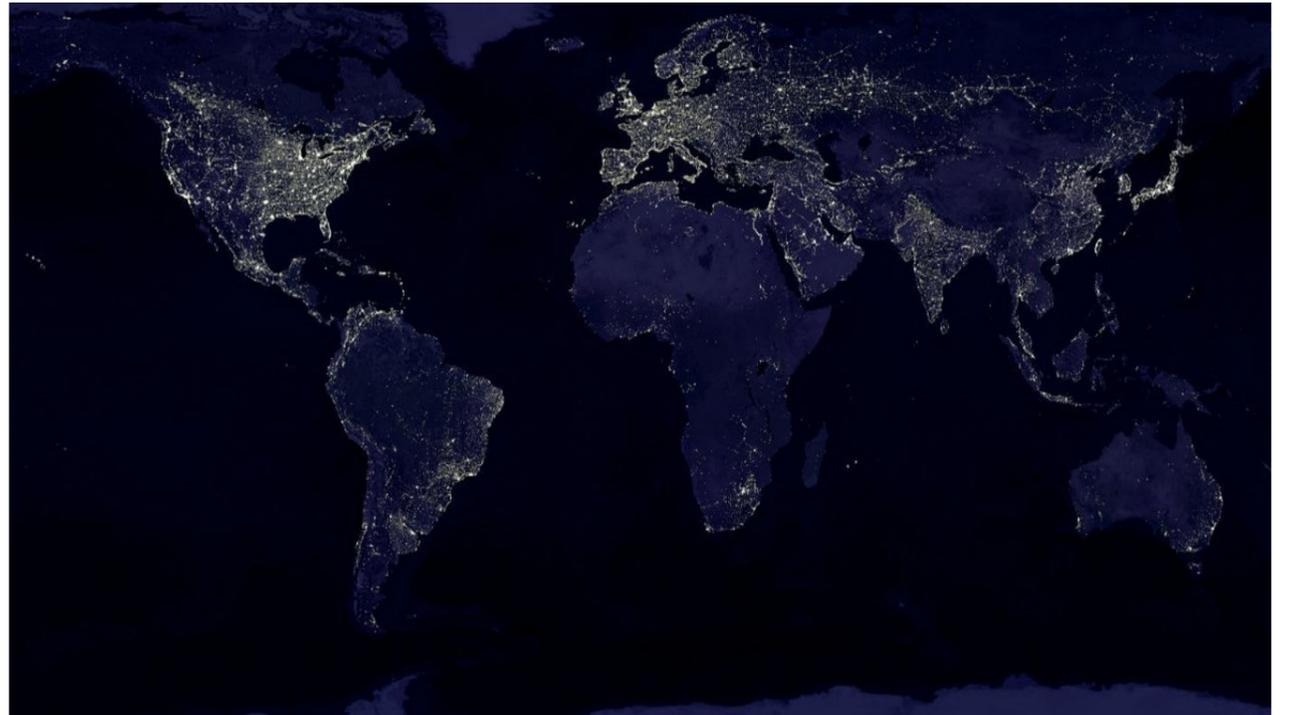
Climate change will affect the poor in two ways. The mitigation and disaster costs will be substantial for low-income groups. But the policy costs will further increase the burden on specific segments of these income groups. In Africa, solar pas-as-you-go services may bring some relief and energy services for those in need. But in developing and developed countries, there are still questions to be asked.

According to Austrian regulator EControl's Household Energy Price Index for Europe, Household Energy Price Index's electricity prices excluding taxes have risen in the past ten years. The rise is unusual since gas prices have a cyclic behavior, and they are 5% below 2015 and %3 below 2019 levels. But with more "cheaper than fossil" prices of renewables, the cost of electricity for households kept increasing where natural gas prices have dropped.

The primary issue is not the policies or government guarantees for clean energy but how the masses will cope with the results of these policies and financial burdens. If the poor will be impacted by climate change and measures twice (both as a result of climate events and policy costs), they will be the ultimate loser.

If one part of the society will be affected by such adverse processes, someone must be on the winning side. One side loses twice, and then some other party must be winning. Who is that winning side? Who is the new rentier class of energy transition?

In Cato Institute's analysis from 2002, Patrick Michaels's article "Why Enron wants global warming?" is an exciting piece. Enron, one of the biggest corporate frauds and bankruptcy in the energy industry, was pushing for a cap on carbon emis-



sions, so that they may profit from the results. Just like big oil companies, the other energy companies have nothing to do with benevolence or saving the world. If extracting minerals are not profitable, new policies may always be a source of profit. Enron was openly against global warming policies, but they see the light and enlightened by it if you believe so.

So someone has to take the energy poverty problem more seriously. One specific example is about how such policies will hit coal-producing regions. Suppose you invested all your life savings into a house in one of these regions where you live with your family. You may even take some bank credit to open a small business there. Overnight your house's value will depreciate, and some government policy will dim your business prospects. Then a new training policy will try to teach you new tricks, and hopefully, you will have a new job. Hopelessly you may lose all your life's savings, experience, and investments.

This week Nobel Prize has been awarded to three scientists "for their experimental approach to alleviating global poverty." One of the important results of their work is regarding randomized control trials. Why this is important for this article is when it comes to energy poverty or poverty resulting from energy transitions, there may not be apparent solutions but trials to find effective interventions.

One example can be how energy subsidies and supports affect children's health and infant mortality. What is the best way to eradicate illnesses and problems because of insufficient access to energy and heating?

As the companies -whether green or black- have no benevolence for saving the world, they have no motivation to keep the poor. As long as there are predictable cash flows and investment environment, self-interest does its job. As energy prices increase, there are better profits or incomes for most of them, including governments. With the poor paying the costs for climate change twice and companies profiting twice, a world with Morlocks and Eloi's of climate change is not a distant reality.

There are ways to improve the situation. First of all, we have to look at energy poverty from a climate change perspective. A carbon tax or green tax should be allocated to poverty policies with an energy transition in mind. Companies should be incentivized to design creative programs to mitigate such poverty issues in their sustainability projects. Most of all, whether for electric cars or renewable energy or efficiency, priority should be given to low-income groups. Otherwise, the new rentier class of energy transition will be too busy with their self-interests to lend a hand to a social disturbance in the making.

Can Iran Close the Strait of Hormuz?



Strait of Hormuz is a waterway between the Sultanate of Oman and the Islamic Republic of Iran. It connects the Persian Gulf with the Gulf of Oman, and at its narrowest point, its width is 21 miles. It carries 17.2 million barrels of oil per day. Assuming a barrel of oil costs 55 US Dollars today, it takes approximately 1 billion dollars of oil each day, breaking one-sixth of world oils. It also hosts Liquefied Natural Gas from Oman, United Arab Emirates, and Qatar, which accounts for 26% of the LNG's globally.

The strait is very busy from oil tankers all around the world, and with something as relevant and as crucial to the world economy as oil comes the security claims. Most of the tankers move around with warships or escorts. US and UK have their warships situated in and around the strait, and in fact, the UK claims the Royal Navy to have stopped the Iranian Revolutionary Forces trying to seize their ship in the Persian Gulf on July 10, 2019. Before that, Iran had been accused of taken two oil tankers from Norway and Japan (Iranian government officially denied this) and shot down a US drone in June. In later July, Iran also accused of seizing a ship from UAE, and a day later, it took two oil tankers from the UK; it released one of the UK ships immediately, but the other, Stena Impero, was only released on September 27. In the meantime, tensions rose after the US claimed it shot down an Iran drone in late July as well, but Iranian officials denied this, claiming the US had shot down one of their drones.



Under international law, the law of straits is governed under UNCLOS which states that as long as the ships are moving through the straits without delay, refrain from threat and use of force to the neighboring state(s), they have the right to move freely (right to transit passage). In the case of Strait of Hormuz, they also have to comply with the rules dictated by IMO as well. Under these rules, ships have to move through Iran's territorial waters, but it could be argued that boats have the right to innocent passage if they enter Iran's territorial waters as well. Stena Impero's owners claimed that they were moving through the high seas, but these claims are not believable since the narrowest point of the strait is 21 miles, which means it has to be in the 12-mile-long territorial waters of Oman or Iran either way.

Iran signed UNCLOS but did not ratify it. But under international law, if a state does not protest the usage of rights born by a treaty (similar to Turkey's 6-mile territorial water claims), it becomes customary law, and states are bound by it. Therefore, Iran is bound by UNCLOS and can't close the strait during peacetime. But Iran being bound by this agreement doesn't mean they could be forced by ICJ to let the ships pass through since Iran has to accept ICJ's jurisdiction in the first place to be sued. Thus, the only thing left for states is to solve the situation without furthering the tensions diplomatically.

Operation Mediterranean Shield Part I: an Introduction



Almost every day, we are hearing news coming from Cyprus island concerning the drilling operations conducted near the island and its surrounding exclusive economic zone (EEZ). Although the international political dispute on the island goes back as early as the 1960s, the current maritime disputes on EEZs go back for at least a decade. And ever since then, the Turkish companies are enjoying the protection provided by the Turkish Navy (DZKK). But the Navy's jurisdiction is not limited by escorting Turkish drilling efforts, but also it covers the prevention of the opposing side's efforts to drill for natural gas near the island. Here's a brief look at the Turkish Navy's efforts in the region.

For those of you who are familiar with naval warfare, you would say that this is a textbook Anti-Access and Area Denial (A2/AD) operation where the goal is to prevent an adversary from occupying or traversing an area of land, sea or air. In our case, it is the disputed EEZs, rich in natural resources located near the Cyprus island. Turkish Navy has launched its operation of this kind dubbed as Mediterranean Shield, on the 1st of April in 2006, with the participation of 2 Task Groups.

As per the DZKK, the operation has the following objectives; to have situational awareness on Turkish maritime jurisdiction and to protect the rights and interests of the Republic of Turkey on its maritime domain. The operation is currently being conducted by two Task Groups stationed out of four naval bases, one in the Cyprus island and the other three located in the Turkish mainland.

Even though the operation initially started as an effort to provide maritime security in Eastern Mediterranean in conjunction with the Baku-Tbilisi-Ceyhan petroleum pipeline becoming operational in July 2006, today, it has evolved into an attempt to maintain Turkish energy interests near the Cyprus island. Today the operation is supported by multiple frigates, corvettes, fast attack crafts, submarines, helicopters, and maritime patrol aircraft to form an integrated, up-to-date naval picture in the area with forces ready to intervene at a moment's notice. And as part of the operation;

- Protection and support are being provided to research vessels operating in the Eastern Mediterranean on behalf of Turkey.
- Research vessels conducting unauthorized research on behalf of other countries inside Turkish maritime jurisdiction are warned and denied access if they continue to operate despite warnings.

As of October 2019, within the scope of Operation Mediterranean Shield, one frigate, two submarines, and two patrol boats conduct reconnaissance and surveillance on the disputed areas, whereas several corvettes and frigates provide close escort duties to Turkish research and drilling ships Fatih, Yavuz and Barbaros Hayrettin. These deployments are supported by aerial patrol and UAV surveillance.

On the next issue, we will be covering what particular tactics and exercises are being carried out by the Turkish Navy to support Turkish energy interests in the region. The last and the third part of this mini news series will have an in-depth focus covering Greek and Cypriot efforts to counter Operation Mediterranean Shield and how Greek military planning aims to counter Turkish efforts.

Curse of Natural Resources

Energy resources have always been strategic importance for states. States set their priorities during the wars to preserve or gain resource-rich locations. There was a direct connection between the amount, and the type of resources states owns and its power in the international arena. For instance, during WWI, Wilson Churchill's decision to shift from coal to oil in the British navy has increased the power of the British navy, and it affected the direction of the war. Over time due to its yield and storage advantages, nations, particularly the Western countries, became more dependent on hydrocarbon resources. Controlling the oil-producing countries and oil checkpoints become vital, priority for the nations. Thus Western states tried kept oil-rich states, mostly in the Middle East, under control to expand their power during after and before the World Wars. Chokepoints like Strait Hormuz and Suez Canal can be given as an example to these points. This situation created and expand the gap between the colonialist state and colonized state, which affected the destiny of the World. Even though we live in a different political era right now, energy security, both in terms of militarily, democratically and economically, still maintains its importance.

Historically we can analyze the importance of energy in three main categories. Stage one: the shift from coal to oil. Oil had the upper hand in terms of productivity, and it was widely-used in compare to oil. However, due to the political instabilities of oil-producing nations, with the energy sanctions and oil crises, states started to look at alternative energy recourses to oil. As a result of these replacement search, we entered stage two: expansion on the usage of natural gas and liquefied natural gas (LNG). In compare to oil due to its ease of handling and storage, natural gas emerged as an alternative to oil. Nonetheless, in particular regions such as Europe, due to transmitter country and oil provider country's quarrel gas buyer countries started to face up with the risk of not being able to purchase the gas that they need to. This instability forces them to rely more on their energy sources, which means investing more in renewable energy sources, which generates the third stage, the rise of renewables.

Environmentalists can support the expansion of renewable resources due to climate change concerns. On the contrary to the popular myth, renewable energy also possess certain dangers to the environment. To begin with, to produce solar panels, windmills and nuclear power plant producers needs rare-earth elements. The majority of these oxide mines are located in the developing world where the mining rules and regulations are not fully established, or states lack the power to implement these regulations. As a result, during the extractions process, both labor's health conditions and the environment gets negatively affected.

Democratizations wise, as might be expected to gain the upper hand in renewable energy production, states have to either invest more in their IT or purchase this equipment (solar panels, windmills, a nuclear plant) from other nations. In that case, developing countries become, again, dependent on the Western World. Since nuclear power plants seem dangerous under the control of unstable regimes, the international community may demand specific political changes in the developing World. They may try to democratize these nations or make sure to keep these nations under their watch, which will create a forward-backward linkage between developing states and developed states. Under these circumstances, installing an atomic power station does not seem the best alternative for the majority of the developing countries, especially for the ones in Africa.

Many scholars such as S. Haber and V. Menaldo claim that a negative relationship exists between the number of natural resources states have and their democracy level. When we look at the world map, recourse rich geographies, and states democratization index, this claim may sound accurate. However, to not fall in omitted variable bias culture and historical backgrounds of these countries should also be taken in to account. Developed states like the US



and Canada also owns mineral mines and oil fields. Also, in Latin America, mineral mines and oil fields contribute to state development by furnishing their economy. One can say that, as I mentioned in my previous article last week, in the Middle East and Africa, people work under anti-democratic, inhumane conditions. States regularly experiences interstate and intrastate conflicts over the control of natural resources.

My response to such claims is many African and Middle Eastern states got their independence later than American states. USA, Canada, and other states in Latin America earn their independence more than 100 years in advanced in compare to Middle Eastern states. Artificial borders drawn by the colonial states without taking into account cultural, religious, ethnic differences and socially dividing these people into groups to control the territory create deep-rooted problems among the citizens in a majority of the states within Africa and Middle Eastern regions.

In compare to mineral mining, oil and gas extraction requires specific education. In that sense, oil and natural resource-rich states have to either educate their workers or import workers to work in these fields. When a state educates its citizen's percentage of skilled labor increases, after a certain point, these states may become skilled labor importer states. In the other scenario, when a country receives foreign workers, its domestic market revivals with the spendings of the guest workers. In some cases, the host state may end up opening new markets that sell cultural items and entertainment places for these workers.

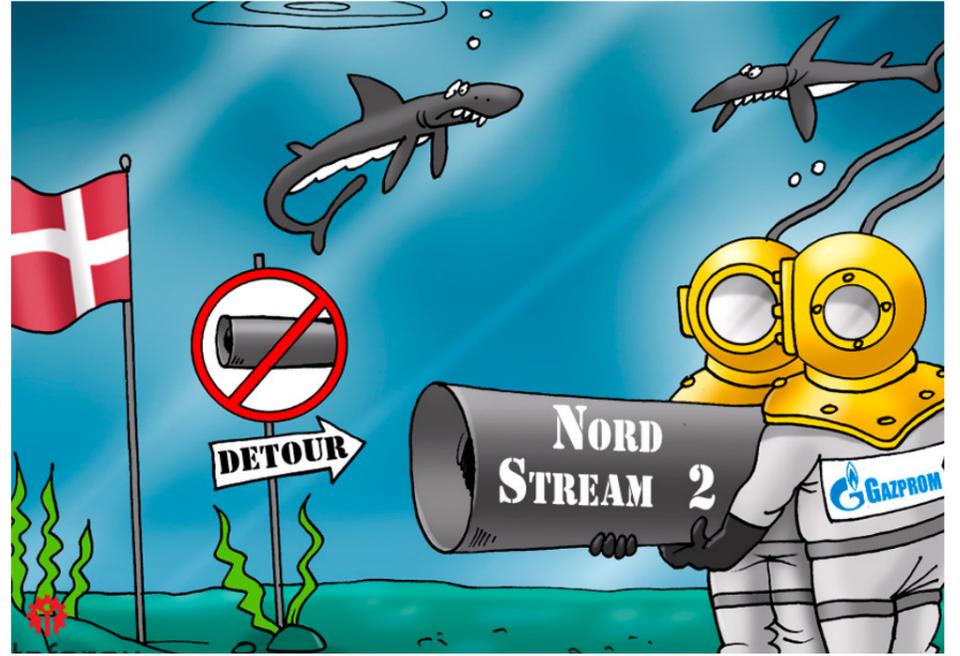
To sum up, with the rise of renewable energy consumptions, energy transitions are slowly emerging. However, at least at this point, due to infrastructure and IT limitations, it would be unrealistic to expect a full transition from hydrocarbon resources to renewable energy sources. Developing countries would face up with many problems during the extraction of valuable minerals, which will affect their development and democratization level negatively. Nonetheless, these states would experience similar problems if there would be less demand for noble metals due to their structural problems. If these countries managed to solve their intranational issues, then they can rapidly improve their state structures. Purchasing and or using renewable energy equipment may also make underdeveloped states more dependent on developed nations and expand the economic gap between third world nations and developed countries. Also, one should keep that in mind that with the Western World's increasing demand for minerals, the likelihood of intrastate conflicts can also increase.

The Nord Stream II Drama

Russian natural gas is one of the major players within the field of energy, and its irreplaceability has been proved. And Russia is aiming to increase its already acknowledged importance by starting to build the Nord Stream 2 pipeline. The Nord Stream 2 is expected to follow the same path of Nord Stream in the meantime make capacity double. The pipeline entry point is the Ust-Luga area of Leningrad, passing through the Baltic Sea to Germany. Nonetheless, the reactions to Nord Stream II are mainly adverse. It has backlashed by the US, the EU, and as well as non-EU states. The pipeline was expected to complete by the end of 2019; however, the building process seems to get longer.

Nord Stream is half-owned by Gazprom, which is Russian government-owned, and all of Nord Stream II. The project even accused of being "Anti-European" and "Anti-Ukrainian" due to several reasons. Nord Stream II is expected to increase the dependency of Germany to Russia and economically punish Ukraine. Since energy independence of Europe has always been an issue, the project viewed as a fraction between the interests of Germany and the interests of everyone else. The plan seems to benefit Germany the most since they half fund it.

Although the transit contract between Kremlin and Kyiv holds an essential place for the transition of gas since Ukraine remains as main gas route, the Nord Stream II aims to eliminate Ukraine almost wholly. The contract will expire at the end of 2019, and Nord Stream II was expected to be completed by then. An exclusion means a potential loss of billion euros for Kyiv. The January 2009 Ukraine Crisis can explain Russia's intention to punish Ukraine. It was when no Russian gas flowed to Europe across Ukraine in the middle of winter, hence causing a humanitarian emergency in the Eastern part of Europe. This event proved the unreliability of Ukraine as a transit state and had to be avoided.



But the view of Russia was similar to the opinion of Ukraine. After the annexation of Crimea, Europe took a stance against Russia, pressuring the union to look for alternative gas sources. Still, there is a reason why Russian natural gas has crushing supremacy to the other sources of energy. Foremost, Russian natural gas is much cheaper. Although liquified gas would be purchased from Qatar, Indonesia, the costs of re-gasification are much higher. In the long term buying liquified gas would not be sustainable. When it is considered the unreliability of other suppliers, such as North Africa, Russia preserves its importance.

Despite the backlash, Nord Stream II has been completed 70 percent, and it was expected to finish before late 2019. However, there is a problem. The uncooperative attitude of Denmark has caused eight months of delay. The planned route was to lay the pipes through the territorial waters of Denmark, which they vetoed due to security reasons. Gazprom has already introduced two alternative ways for the pipeline, but due to environmental assessment, the Danish Energy Agency requested the third one. The agency confirmed that Gazprom applied for another route passing from a Baltic Sea island, namely Bornholm, which is in Denmark's exclusive economic zone. Still, there is a possibility of Denmark refusing the alternative route, yet Gazprom stated, in case of noncooperation, they would find neutral zones to build Nord Stream II into. For now, the renewed date for the launch is 2020.

İrem Ayça Aykın

BRENT OIL

58.82 \$/BL

GASOLINE

6.94 ₺/LT

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5.82

DIESEL

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3.82 ₺

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