



**EDAMA**  
Energy, Water & Environment

## Position Paper

**Renewable Energy Sector Opportunities & Challenges**

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## Renewable Energy Sector Opportunities and Challenges

On 13 January 2019, the Prime Minister's Cabinet issued a decision. This decision proclaimed that all approvals for energy projects will be suspended for 6 months, including Renewable Energy projects, specifically those with a capacity higher than **1 Megawatt**. It was stated that this decision was needed, given that the Ministry of Energy and Mineral Resources (MEMR) is formulating a new **Energy Sector Strategy**, to be announced.

The plan to establish a new Energy Sector Strategy was driven by Jordan's capacity to produce not only its energy needs, yet an excess of it. Furthermore, the increased demand on investment in the renewable energy market, impending from both the public and private sectors.

MEMR declared that this suspension on energy projects will be temporary until the Ministry completes relevant studies that will feed into the strategy, such as the grid capacity to accommodate renewable energy and its accompanying package of laws, regulations and economic studies that will be necessary. After that, it will be possible to issue the new Energy Sector Strategy.

This decision was scheduled to end 6 months after the above-mentioned date; however, as of the current date of 22 July 2019, the new Energy Sector Strategy has not been revealed, the relevant studies have not been completed and the suspension has not been lifted.

There has been extensive talk in the past couple of months about solutions and suggestions to solve the problem facing the energy sector in general. The solutions, however, only address the renewable energy sector, focusing exclusively, highlighting the importance of assigning a fee—to be paid by the owners of the renewable energy projects—in exchange for using the grid, specifically when it comes to surplus energy produced and saved to be used at a later time by the same owner.

It is worth mentioning that the surplus energy will not be stored, but rather made available for other consumers. Yet the recent regulation is worded in such a way as to make it sound as if those who do not produce renewable energy will be the ones paying the fees for "the stored renewable's electricity"

### In light of the above, it is crucial to note the following points:

- Countries that plan to integrate renewable energy within the total Energy Mix, must prepare to introduce a calculated percentage of each type of renewable energy into the power system annually, taking into consideration the capacity of all stations and their locations with regard to both distribution and transmission grids.
- Requested technical studies by electricity companies, particularly the "grid impact study" to be submitted in order to be granted approvals on the installation of renewable energy projects, these studies determine the points of connection and the technical limitations and it primarily looks into the adjacent loads that will be able to consume the surplus energy produced if that was the case. Subsequently, approvals would be granted.

This process draws questions on the following statement: "those who own renewable energy projects use the network for storage purposes." Suffice to say that the storage of surplus renewable energy mentioned in this statement is questionably to be a technical reality in small and medium systems.

It should also be noted that decentralized renewable energy projects located close to the consumption points contribute to decreasing energy losses on the grid. Energy loss increases when electricity is being transmitted from centralized generation located further away from consumption points; interestingly, consumers bear this cost.

One of the major conditions requested by small and medium renewable energy power plants, through



- the connection agreement, that system owners must install at their own expense monitoring and control systems which enable electricity companies to control the amount of electricity being produced. Additionally, the capability of stopping or allowing this production to continue, in accordance with the instantaneous state of the power grid which technically serves distribution grid, also enhances it for all electricity grid consumers to benefit from.

- Moving the owners of renewable energy systems into subsidized electricity segments is expected as a result of the disruption and deformation that is apparent in the electricity tariff structure, which could have been merely amended without the need for announcing is as if it is disrupting the less fortunate minority.

- Self-consumption has always been an option and has recently increased in demand (where owners fully utilize the energy produced by their renewable energy project without exporting to the electricity grid). It is now possible to mix full coverage of the consumption from renewable energy resources along with controlling electricity injection to the grid. This can be achieved through the use of batteries, which has been something in many countries have been directing their efforts towards in hopes of creating limits for electricity injection to the grid during peak generation. This requires working on a regulatory frame work that would foster the investment opportunities in storage systems.

Signaling a public-private sector partnership must not be a matter of slogans. On the contrary, it should be the case when implemented. The nature of this sector requires a comprehensive view on all the technical details and its effect on every single stakeholder in this equation. This thorough outlook on matters will circumvent the sector from rash decisions which are based solely on financial benefits that has proved over time to be a mistake. This partial approach to what the renewable energy sector has to offer is a step backwards and must have noted the national greater good. There seems to be an unclear vision, and in all cases, there must not be any attempts made to burden the rising and promising renewable energy sector. An accumulation of weak planning for many years in the sector, as well as drowning in financial details without paying attention to the full picture, will result in an increase in expenses and burden the Jordanian citizens.

The evaluation of the renewable energy endeavor or the planning for stages to come will require exerted efforts invested in creating a proper Energy Sector Strategy, one that aims at fulfilling a greater national good, on an environmental and economic level. Should we achieve this goal, the following points must be noted:

### **Renewable energy is identified to be one of the most important sources of local energy in Jordan.**

- This should be the beginning. Renewable energy will be a strategic decision rather than provisional. The approach to overcome financial and technical matters must be amended. After that, dealing with the current structure the electricity sector to enhance independence and achieve energy security is crucial. Energy Security is no longer a luxury. After reviewing the sector's previous experiences with depending on foreign energy sources sent from outside of Jordan, it is clear that renewable energy is an integral focal and starting point. For that reason, other factors can be adapted.

Jordan has a marked success in the construction of around 1200 Megawatts generated by renewable energy projects, and it will exceed 2300 Megawatts in the next few years; 500 Megawatts currently comes from "net metering and wheeling," which is equivalent to only 20% of the total renewable energy capacity, and its source is local investments.



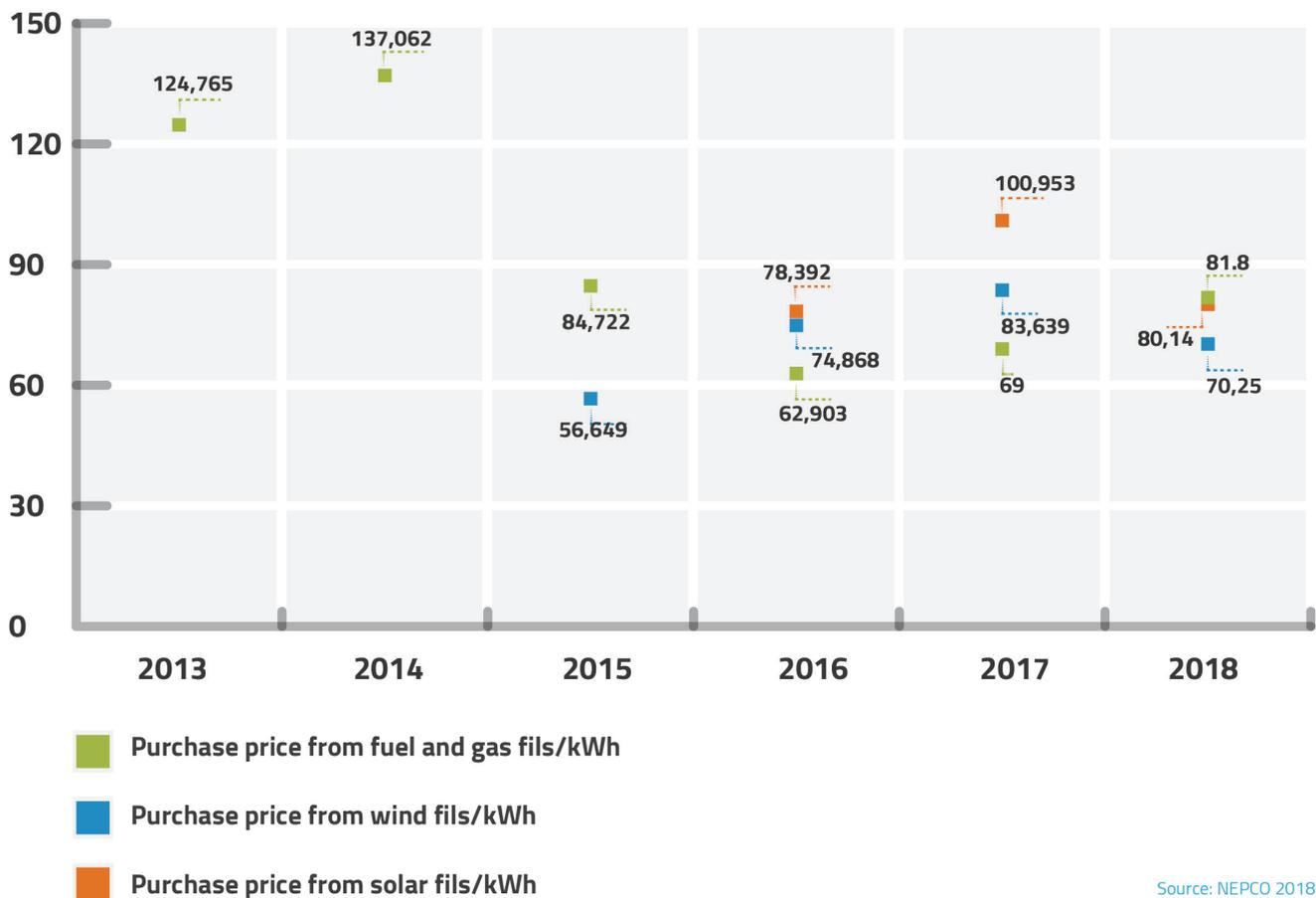
## > Retrenchment of expenses

In spite of all that has been said about the increase in the cost of producing electricity from renewable resources, the latest numbers that have been issued in the annual report from The Jordanian Electrical Power Company (NEPCO) for the year 2018, indicate that the average purchase price for renewable energy has reached 70,52 fills for every KWH for wind energy, and 80,14 fills per KWH for solar energy in comparison to 81,8 fills per kWh from electricity generated from fuel and gas.

It is foreseen that there will be an apparent drop in the purchasing price of renewable energy in the upcoming years, and it will coincide with connecting the projects from round two and round three from the direct proposals, as the purchasing price will drop to 20 fills for every KWh

Notwithstanding that, allocating a larger capacity from renewable energy on the grid might need additional expenses, yet, the return on investment on the centralized projects will benefit all parties.

**Average Price of Energy Purchased from Power Generation Companies**





## ➤ Higher employment rates and a replenished national economy

Notwithstanding the fact that there are 352 licensed companies that employ more than 7,928 employees as of 2016, there is a flourish in businesses, services and supporting services that rose and is directly connected to this sector.

In reality, this can be labeled as a poor evaluation of the sector's capabilities and a short-term vision when it comes to cost and economic replenishment on a socio-economic level. Additionally, local organizations were given the chance to compete at a higher level given that their energy bills shrunk.

## ➤ Attracting investment

It is estimated that the energy sector will be worth 4 million dollars by the year 2020. Currently, Jordan is facing challenges with regard to high unemployment rates and the inability to attract investors to the country; this is from one perspective.

From another perspective, renewable energy contributes to directing foreign currency into developing other vital sectors dynamics. In 2018, NEPCO purchased 3729,3 thousand tons of oil equivalent, which was utilized to supply conventional energy-generation companies to produce an estimated 17182,9 GWh, whereas renewable energy contributed 1541,55 GWh, which saved around 10% from what was spent to purchase fuel.

Add to that the capacity of renewable energy to open up new horizons for local industries in case there was an evaluation to provide incentives for this significant sector.

focusing on the upcoming challenges without taking into consideration a long-term vision and strategy. This is what brought us to this point: we are forced to choose between dependence on importing fuel or the production of local renewable energy with competitive prices. This matter cannot view this in any other light.