



EDAMA
Energy, Water & Environment

Position Paper Renewable Energy Wheeling Projects Disconnection During Lockdown Periods





The National Electric Power Company (NEPCO) disconnects the systems of solar power plants connected to the grid through wheeling during the lockdown, according to its justification due to the decrease in the electricity demand and thus the lower loads, although most of these systems belong to vital sectors such as private hospitals, telecommunications companies (public facilities), and supply chain companies that work during the lockdown, which has great economic consequences for these entities, in which the main reason behind installing these systems is to reduce their operational costs, while they are still in the stage of paying their financial obligations to the lenders, supposedly PV plants should be operated at their highest in order to be able to play their role during the pandemic period and not affect the expected payments to lenders .

The reasons why NEPCO disconnect the wheeling systems is to maintain the stability of the electrical grid and We as EDAMA believes that it is possible to overcome the stability challenge in other ways, without having to disconnect and dump the electricity generated from the renewable energy resources, which belong to vital sectors;

- The decrease in electricity demand in the week end days is expected, however it may not exceed 200 megawatts with the presence of wheeling projects, which may lead to difficulty in handling evening loads, which requires operating conventional units that is suitable to cope with the load in a short time, since solar energy projects will stop generating electricity, yet this does not considered as a justification for disconnecting the renewable energy systems throughout the day, especially in the morning period, and if necessary, the disconnection process must take place in the afternoon period, i.e. after 3:00 pm.

- Renewable energy power plants contribute to lessening the impact of load reduction through inverters, as the transformers have the ability to handle the reactive power in the grid in case of low loads in transmission lines. It also prevents the electrical system voltage from rising, which contribute to stabilizing the grid. This proves the lack of technical perspective in the disconnection decision and the importance of the coordination with project owners and developers to be part of the process.

- The presence of the Egyptian interconnection line and its role in supporting the stability of the electrical grid is an important matter and is considered as a support and backup for controlling the grid frequency. however, when the decrease in demand is anticipated and known in advance similar to the lockdown period case; It is expected that it will not affect the stability of the grid significantly, such case is considered the least challenge that could face the electrical grid during the transition to renewable energy.



➤ If disconnecting renewable energy systems is the last resort, then NEPCO must start disconnecting the power plants owned by governmental institutions and granted projects such as the Quweira project. The total capacity of solar and wind which meets this criterion is more than 200 megawatts. This will lead to mitigating the detriment to project owners from national companies and institutions funded by Jordanian and international banks, as well as the indirect consequences that materialize to maintenance and operation (O&M) sector in addition to projects development.

In spite of the above, dealing with situations of closure, lockdown or emergency, must be done through a methodology that seeks to deal with the challenge in the most appropriate technical way, as it is necessary to work on the following action points as soon as possible:

1. Re-activate the electrical storage project that was canceled or postponed, noting that if the project was implemented, we would now have the electrical storage capabilities that will help maintaining the stability in addition to addressing any imbalance that may occur with the Egyptian line, andline, and this situation in which the separation disconnection of stations plants would lead to heavy losses for national companies and investors.
2. Accelerate the issuance of storage instructions on low and medium voltage electrical networks, as these instructions will spread electrical storage capabilities that are controlled for purposes of network stability and help in reducing the burden of increasing evening loads on the network.
3. Encouraging the extensive import and acquisition of electric vehicles, which helps to increase the storage capacity of the network and absorb the surplus generation if that it occurs, which will stabilize the network and avoid measures harmful to the national economy.
4. Reconsidering the electrical tariff to achieve balance and give the required dynamism in the pricing of electricity for different segments in a way that guarantees stimulating the increase in electrical consumption during periods of abundant production and reducing consumption in periods of peak loads.



It is also worth noting the obligations of the owners of these vital projects from hospitals, telecommunications companies, and their developers in the front of the financing agencies, which make it their right to obtain detailed and approved technical answers to explain the reason behind the separation disconnection of transit wheeling regulations systems in front of investment agencies and international banks, as these decisions have financial contractual consequences and Legal consequences.

EDAMA association is ready to help in developing the energy sector in a way that serves Jordan in order to attract investment and create job opportunities in this vital sector, self-reliance and our own resources enlightened by the directions of his majesty, may God protect him.