LCoE for PV system is 0.08985$/KWh. This implies that the PV systems over its lifetime will provide cheaper electricity than the conventional sources.

4. Conclusion

The performance analysis of Nigeria electricity network was effectively carried out with the clear set objectives in focus throughout the study. Using PowerWorld simulator, the load flow analysis and contingency analysis of the modified network, that is the network with PV system integration, were studied. The results showed that PV systems whose source is in abundance in Nigeria can help us achieve power system adequacy and stability to reasonable extent.
This work is recommended for all power generation companies in Nigeria (Gencos). Once Nigeria power network is strengthened, the next challenge will be low generation capacity. This will lead to more electricity supply challenges in Nigeria. Generation companies can use the PV systems as relief stations when there is good insolation and gas supply is low. They can also use PV systems integrated to the grid to control

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