CHAPTER FIVE
CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Today's electric grid was designed to operate as a vertical structure consisting of generation, transmission, and distribution and supported with controls and devices to maintain reliability, stability, and efficiency. However, system operators are now facing new challenges including the penetration of RER in the legacy system, rapid technological change, and different types of market players and end users. The next iteration, the smart grid, will be equipped with communication support schemes and real - time measurement techniques to enhance resiliency and forecasting as well as to protect against internal and external threats. The design framework of the smart grid is based upon unbundling and restructuring the power sector and optimizing its assets. The new grid will be capable of:

-Handling uncertainties in schedules and power transfers across regions

-Accommodating renewable.

-Optimizing the transfer capability of the transmission and distribution networks and meeting the demand for increased quality and reliable supply.

- Managing and resolving unpredictable events and uncertainties in operations and planning more aggressively.

5.2 Recommendations

As the project planned, only had pulled the grid connection requirement for photovoltaic generation, which has been planned to stretch upon to the study. Also, few more work related to micro grids.

And what to looked-for for future scope is to demonstrate the possibility of merging another renewable source such as wind energy to integrate with the photovoltaic generator source to be a hybrid grid connected with energy storage system. Upon the finalizing of the entire study, the further research prospectively would handle various study of load regard to megawatt required with respect to current and future energy demand and establish methods of control the entire system.

In matlab simulink we recommend to use buck-boost converter replacement of voltage regulator.

-References

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