

Fig-15 Output of partial power converter while working as a boost mode inverter DC link side

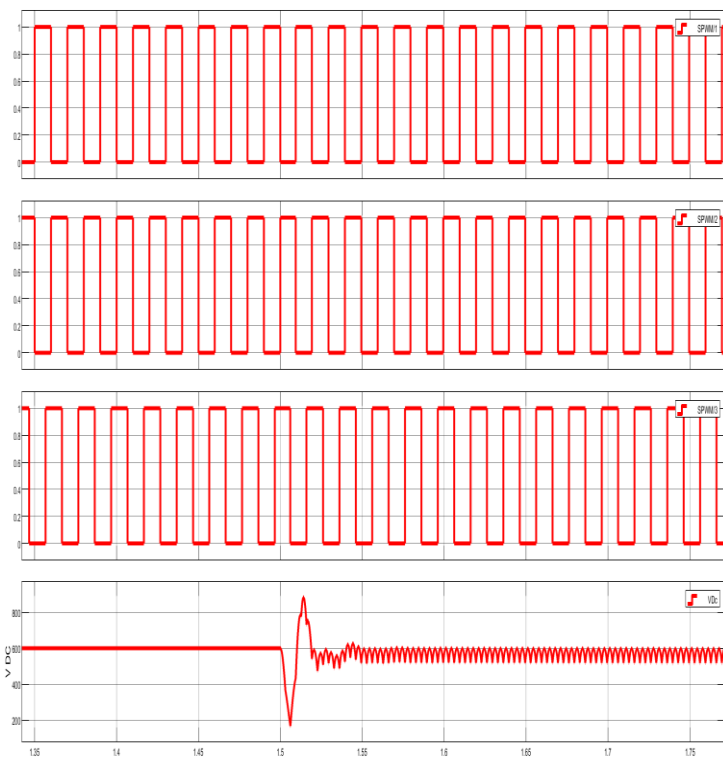
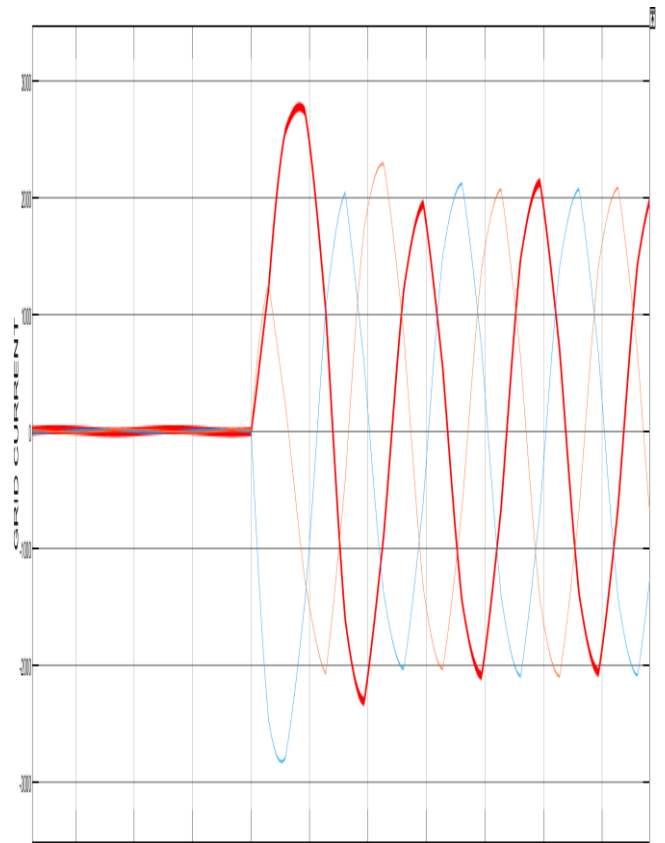


Fig-16 Switching Of Inverter

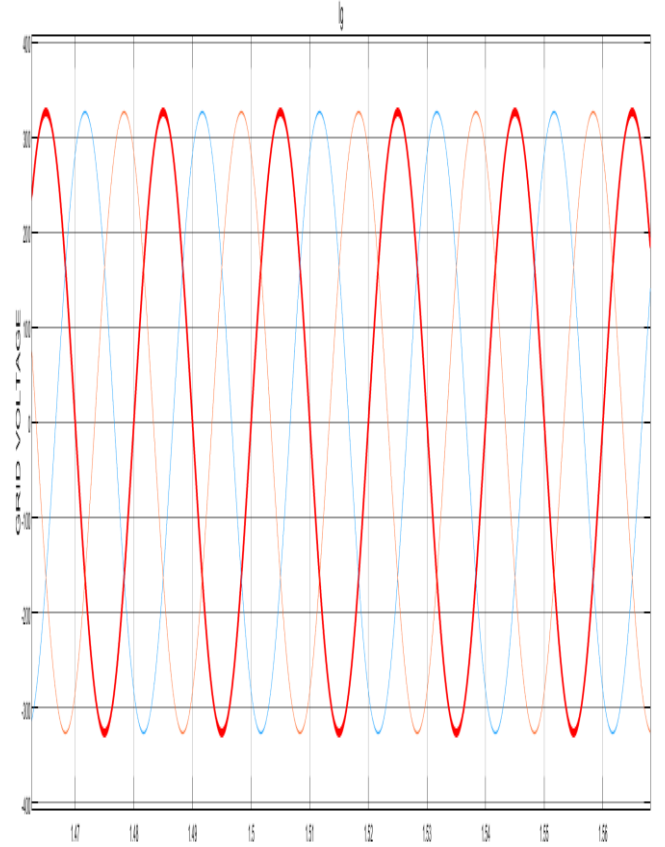


Fig- 17 Grid Voltage and Current with respect to time

7.CONCLUSION

Energy management is the uttermost need of the present time, there are lots of losses caused due to burden of extra equipment's present in the system and in PV where in the first place the power that is produced is not at a good efficient rate so we have to transmit this generated power at a most efficient manner that can be possible, so we have to reduce the losses that is caused by the burden of the inverter, converter and energy storage system and we have to also to focus on the energy management in the grid so that the grid does not destabilize at the time of maximum peak demand and we can supply power. We in this project have tried to reduce the losses of equipment's by using a bidirectional partial power converter, and to reduce the maximum demand at peak load we have also incorporated energy storage system like the battery. We cannot complete support the sudden load for large extent of time as due to the battery constraint, but we can support the power flow till the backup come into action in this project we have tried to this by designing a control loop for the battery and used a bidirectional partial power converter which can work in both buck and boost and allow to store the charge in the battery from buck mode, and give it back to the grid in boost mode. This project helped to minimize the loss as well as help in peak shaving of the load at the maximum demand occurs.

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