6. Results

This paper provides the results from all above waveform and discussions; we have found the results of control of wind turbine with induction generators interfaced to grid with power electronics converters are the best for improvement of performance of wind power turbine because the power electronic converter technology reduce the harmonics and noise of this system. The variable speed induction generators provide constant voltage on the bus bar and the DC voltage show on the Digital Multi Meter and the positive terminals of bus voltage is connected to transformer and generates ac 220V for the grid with reduction of noise from line. The ac voltage of grid is show on the Digital Multi Meter which is connected to load with the help of switch and the microcontroller controlling the voltages and frequency of this system. We have taken wave form of this system with the help of PWM technology with CRO and it show the voltage, duty cycle and frequency of this system with respect to time. The power electronics converter also provides the feedback mechanism to sense the output ac voltage and it is controlled by PWM technology with duty cycle correction.

All these noises and harmonics of power supplies are controlling and reducing by microcontroller with the help of other power electronics equipment. So, this system is the best for the wind power turbines to grid.

7. Conclusion

This paper provides the conclusion from all above waveform, discussions and results; we have found the conclusions of control of wind turbine with induction generators interfaced to grid with power electronics converters is best for the wind turbine power because the induction generators provides constant frequency and voltage to grid with power electronics converter technology. It also improves the power performance of the wind power turbines for grid because it reduces the all harmonics and noise from the grid. In this project, using of PWM technology with transformer topology to convert DC voltage to AC voltage to grid, simulation of wind turbine interfaced to induction generators by use of variable speed dc motors, combining power output of induction generators to charge common dc bus bar and also using feedback mechanism to sense output ac voltage and control by PWM technology with duty cycle correction.

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