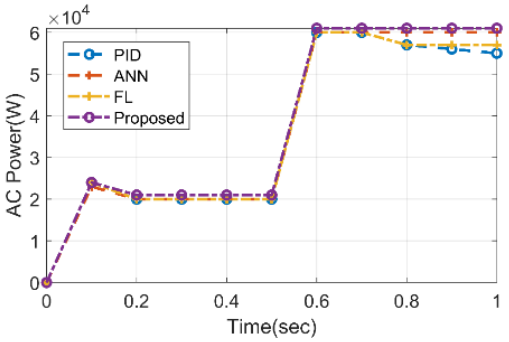

Figure 16. Comparison of AC power vs time

The calculation of AC power as a function of time using different comparison methods such as PID, ANN, and FL is displayed in Figure. The value of AC power during a period of 0 to 1 sec is recognized for all of the other procedures, as displayed in the graph. However, the value for the suggested technique is kept constant, resulting in a steady output power after 0.5 sec at a value of $6.1x10^4$ kW which is maximum than other techniques.

5. CONCLUSION

This research has, Harmonic Response Technique that is used to increase power stability by determining distorted current waveforms that contribute to harmonic energy levels utilizing a Packet wavelet transform-based high impedance fault diagnosis. A Feedback controlled fault current limiting Converter is also used to decrease fault current distortion, which regulates the system using a shunt active power filter in a current fault limiter. Furthermore, a novel Balanced Phase Transition Technique balances power discrepancy in transition by determining energy consumption over the current demand period using reactive power & load factor of the converter using triangular functions, resulting in a balanced load phase angle and smooth transition between phases. Thus the adopted techniques are simulated in the MatLab platform and the outputs are obtained in terms of frequency for the system lies between 75 to 250 Hz, the system voltage is noted as 400 V, the amplitude is gradually reduced from 0 to 1.5 sec, the irradiance is rapidly ramped down from 1000 W/m^2 to 200 W/m^2, load phase angle of the system is observed to vary from 0 to 2000 V in the positive sine wave and the current because of the load is varied slightly to 275 A and the power from 600 kW is gradually reduced to 125 kW. Moreover, the proposed techniques performed better than other existing techniques and proved better performance.

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