Objectives and Scope of Research Work

This study aims to explore the different Frameworks of Sustainability proposed in the industry for Green IT and Smart Grid Energy based networks; identifying the factors that contribute to the Carbon emissions’ vis-à-vis the different Software Development Methodologies deployed across the industry for enabling Green IT Principles. The present study will be conducted with the following objectives.

1. To identify different s/w product life cycle stages
2. Understand how the various sustainability aspects effect the various stages of software development
3. To collect data from industry on the sustainability factors considered for their software product development
4. Arrive at emission statistics at various life cycle stages
5. Analyze data based on various software development process followed vis-à-vis the sustainability factors
6. Analyze the impact of carbon emissions on SDLC
7. Identify various methodologies for reduction of carbon emission at various product lifecycle stages
8. Suggest Possible measure to improve carbon emissions

To further amplify, the scope of the study covers, the historical background, growth and development of Software Development Life Cycle Methodologies, and energy consumption patterns across the various levels in the industry, various engineering initiatives along with focuses on the recent developments in policies by different nations to strengthen the Green IT efforts. Further, it analytically examines the data that is produced at the unit level activities of different concepts in vogue for development of software systems to draw conclusions on the strategies deployed.