EE-474 Distribution Systems
Term Project – 3

Aim: Simulate the defined network under the specified conditions in PSS/Sincal environment.

- 34.5 kV infinite bus supplies a load of 30 MW.
- Cable: 240x3+25 mm^2 (copper)
- Connectivity:
    - Supply – DT-1: 2 km
    - DT-1 – DT-2: 2 km
    - DT-2 – DT-3: 3 km

Tasks:

1) Determine the load voltages and losses for the following cases.
    a. The load is demanded at DT-3.
    b. The load is demanded at DT-1
    c. The load is equally distributed to DT-1, DT-2 and DT-3.

2) Assume there exists another DT (DT-4), such that DT-4 is connected to DT-2 via 2-km-long cable (same type). Load is distributed as follows:
   DT-1: 10 MW
   DT-2: 10 MW
   DT-3: 5 MW
   DT-4: 5 MW
   Determine the load voltages and losses.

3) Report your findings (Discuss your results, compare found values, etc.).

Results:

- You should submit all reports via ODTUClass in pdf format.
- State all references and sources you used (books, papers, online tools, websites, etc.).
- Format of the reports are also graded. Pay attention to the formal writing rules.
- No late submission is allowed.