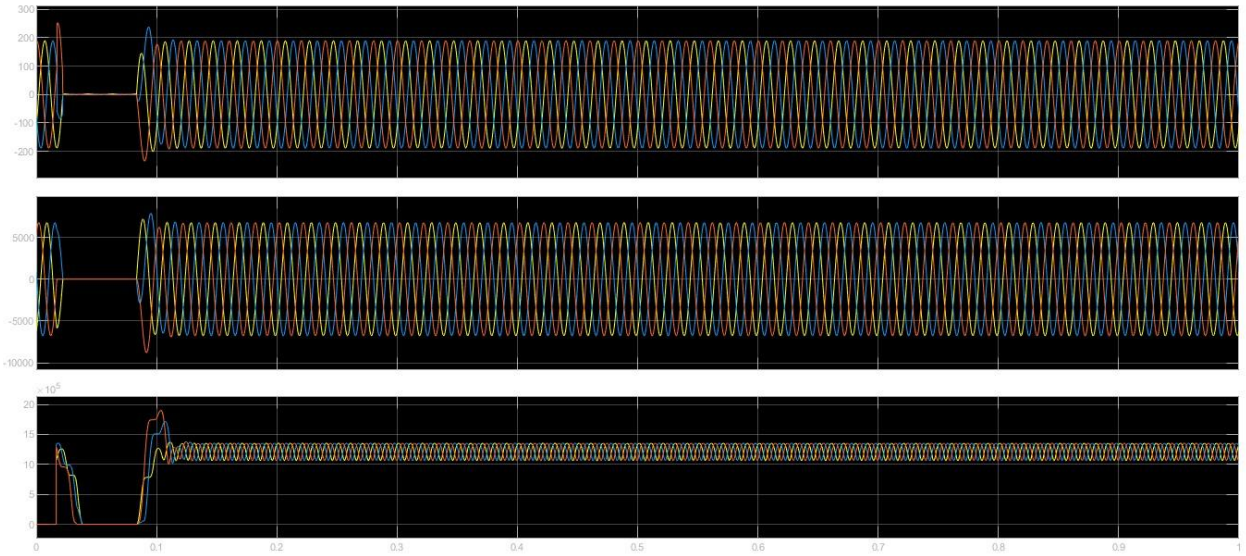
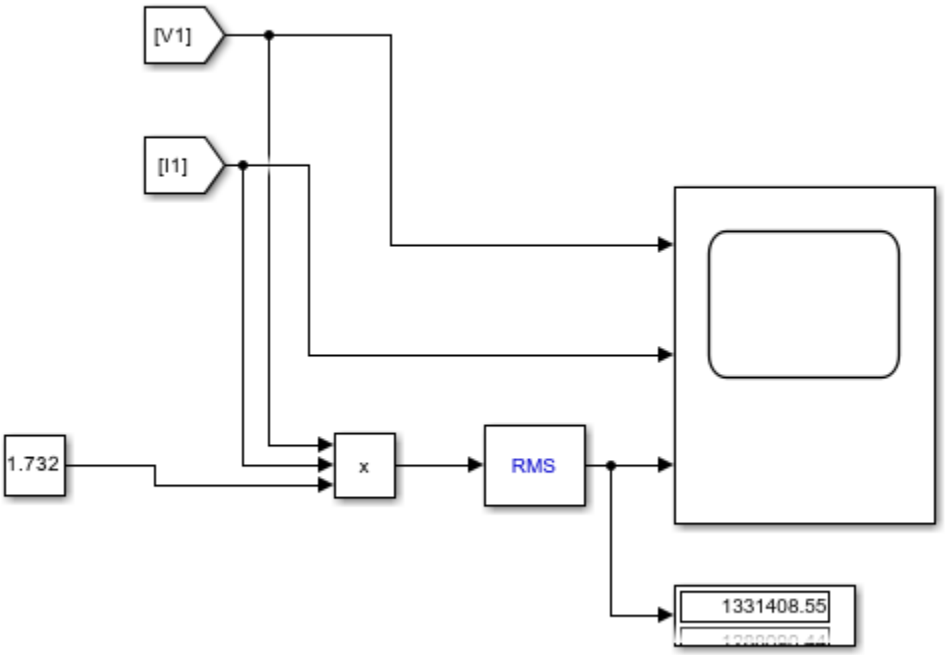
Eminence E22_Quadra – Power task

1.

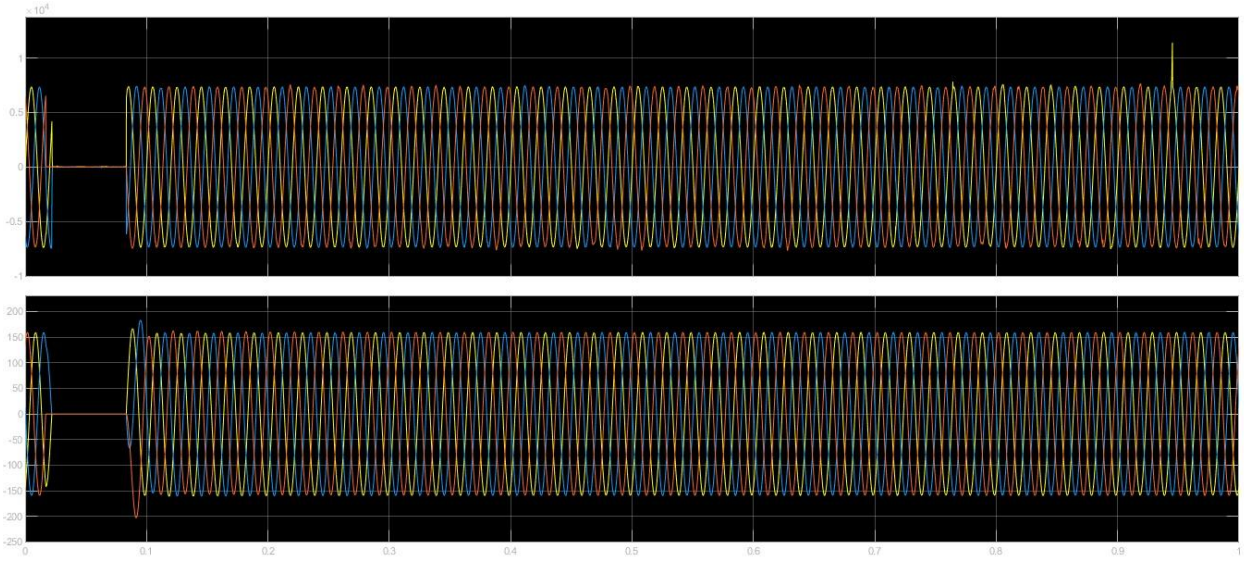




2.

Generator	Voltage	Current	Power
Generator 1(2 MW)	106.91 v	72.64 A	523962.78 VA
Generator 2 (5 MW)	20.66 v	22.75 A	166157.13 VA
Generator 3 (12 MW)	228.65 v	143.65 A	920152.20 VA

3.



When the load is increased from 2 MW to 12 MW:

- The **load voltages** drop slightly because more current flows through the system.
- The **generator currents** increase to supply the higher load.
- The **generators supply more power**, and the **total system losses** increase.
- The **waveforms** from the simulation show higher currents and slightly lower voltages, which confirms the system is responding correctly to the higher load.

  Conclusion: Higher load causes more generator output, increased currents, and higher losses, which is clearly visible in the simulation waveforms.

4. Total power generation = 1610272.11 VA
   Power loss = -2000000 VA +1610272.11 VA = -389728 VA
   The system has almost zero power loss