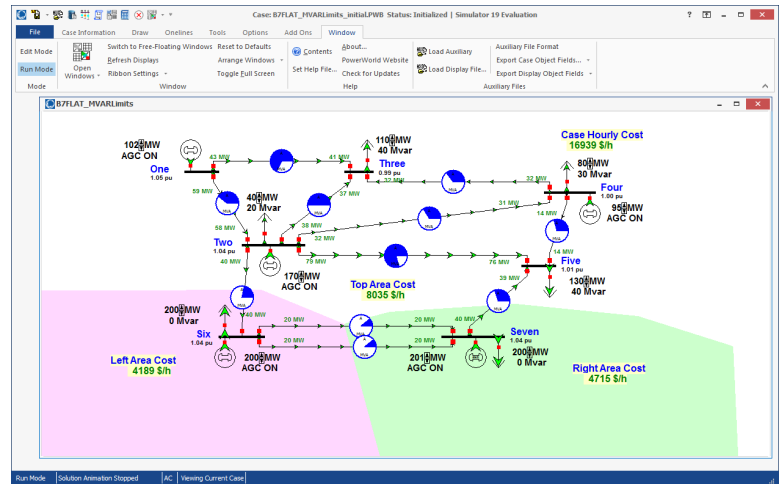


Introducing PowerWorld



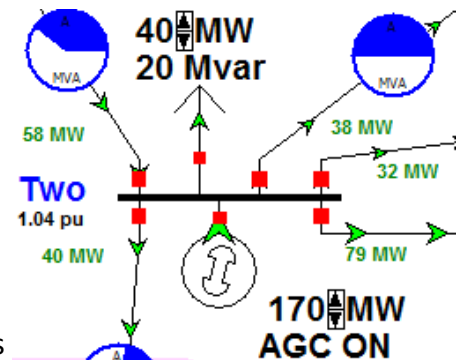
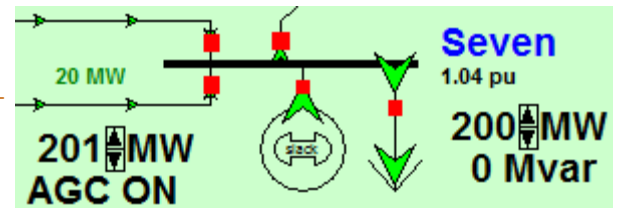
B7FLAT_MVARLimits_initial.PWB

- Open the PowerWorld Simulation.
- Go to the File Menu and open the B7FLAT simulation case .
- You should see the opening screen.
- Click on **Tools** in the ribbon tab. Then click on the **green arrow** to play the simulation. You should see the generator symbols turning and the green power flow arrows moving.



RESET THE SYSTEM AT ANY TIME BY CHOOSING THE B7FLAT FILE FROM THE FILE MENU.

- Each of the five generators has automated generation control on and has adjustable output. At bus One the generator is producing 102 MW of power.
- How much power is being produced by the whole system? _____
- The arrows that look like they're going nowhere are showing power going to the loads (demand). At bus Seven the demand is 200 MW and the generator is producing 201 MW.
- How much power is being used by the whole system? _____
- What happens to the other generators when you disconnect the generator near Bus Six by clicking on the red square just above it? Does the demand change? _____
- A closer look at Bus Two shows power flowing in and out. How much power is leaving Bus Two? _____ How much is entering? _____
- Blue circles show transmission line power flow as a fraction of capacity. Find the line between Bus Two and Bus Three. Estimate its capacity. _____
- What happens when you click on a red square? _____
- What happens if you adjust the output or disconnect the generator near bus Two? Near Bus Seven _____
- When the system is operating well the per unit (pu) voltage at each bus should be close to 1.00.



The PowerWorld Simulator is a tool used by transmission planners, power marketers, system operators and trainers, and educators desiring access to power system information and analysis.

