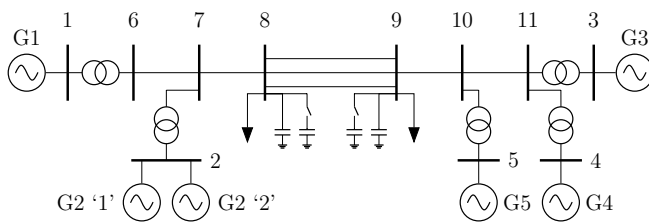


Recent Progress:

1. **PSLF License Expires June 30.**
2. R_{eff} removed from simulation.
3. Multiple Generators per bus tested as working.
4. First Balancing Authority Agent tested on six machine system.
5. Timer and Power Plant Agents added.
6. GitHub updated:
<https://github.com/thadhaines/>

Current Tasks:

1. Continue to Update Code flowchart to aid in further development.
2. Work to incorporate Matt's *Suggested Use Cases* into simulation.
 - Add Shunt Group Agent
 - Work to Define Definite Time Controller user input
 - Refine Agent actions for AGC/LFC (i.e. ACE / UCE / SCE calculations)
 - Test Generator and line tripping events.

**Current Questions:**

1. What should be included in BA options? (Filtering, Distribution options...)
2. How to handle non governed Machines on AGC? (ramp Pm?)

Future Tasks:

- (a) Formulate feasible plan of action for casting all WECC governors to LTD governors (tgov1). Something like:
 - i. Parse models of interest from dyd.
 - ii. Create dyd from parsed model.
 - iii. Automate a 'scaled' Pref step test for a one machine infinite bus in PSDS.
 - iv. Read and analyze output data
 - v. Generate/Calculate LTD equivalent model parameters from results (this will probably use MATLAB and `jfind`)
 - vi. Export custom dyd for LTD simulation. (PSDS would still use original the dyd, though *could* use modified dyd)
- (b) Add import mirror / bypass mirror init sequence option to prevent repeated mirror creations.
- (c) Create an agent for every object: ULTC, SVD, Transformer, ...
- (d) Investigate line current data and ULTC action in PSDS.
- (e) Account for different types of loads (exponential load model)

Matt Requests:

- (a) Enable multiple dyd files to overwrite / replace previously defined agents/parameters
- (b) Allow for variable time steps.

Initial BA Results: A 75 MW step in load took place in Area 2. Since Area 2 was already importing ≈ 100 MW, the BA action increased generation in Area 2. Eventaully, ACE and Interchange Error go to zero and frequency returns to 60 Hz.

