Recent Progress:

1. Program form and Committee form filed in Grad Office
2. Graduate seminar presentation scheduled for Oct 22nd
3. PSDS WECC / MiniWECC PSS work
   - 100GW_ALS_SHAWN.sav runs flatlines. SVDs act, f inc by ≈4.2 mHz, Pg inc by 0.003x
   - Dynamic simulation errors in 16HS3a and 18HSP2a probably related to `dcc` table entries of `nan` and `-nan(ind)`
   - PSS takes ≈45 seconds of flatlines to settle - can't seem to avoid.
   - PSS has most effect on Reactive Power Output and Bus Voltages.
4. BA control can now include windowed IACE. Ramp results on reverse.
5. Area agents log area losses.
6. GitHub updated: `https://github.com/thadhaines/`

Current Tasks:

1. Continue to Refine BA ACE actions.
2. Work on miniWECC and WECC integration.
3. Update Code flowchart
4. Outline thesis & presentation

Current Questions:

1. How to best deal with PSDS PSS issues (system is not in steady state at simulation start). Does it really matter?
2. Realistic AGC results?
3. Typical deadbands of AGC?
4. Recommended deadbands of governors? Intentional: 36 mHz max (NERC), Inherent: less than 5 mHz

Future Tasks:

(a) Use generic governor for non-modeled governors (WECC) - estimate tgov1 time constants from machine H (and MW cap?).

(b) Add import mirror / bypass mirror init sequence option to prevent repeated mirror creations.

(c) Bring wind into simulation (ramp ungoverned generators?)

(d) Find best/correct way to trip gens in PSLF from python.

(e) Investigate line current data.

Future Work: (not by me)

- Account for different types of loads. (exponential load model)
- Work to incorporate Matt's *Suggested Use Cases* into simulation.
  - Add Shunt Group Agent
  - Work to Define Definite Time Controller user input
- Investigate ULTC action.
- Create an agent for every object: ULTC, SVD, Transformer, …
- Get away from reliance on GE

Matt Requests:

(a) Enable multiple dyd files to overwrite / replace previously defined agents/parameters

(b) Allow for variable time steps.

miniWECC3A2IACE 20 Minute +400 MW generator ramp in Area 1.
TLB type 2 (ACE sent only if same sign as $\Delta\omega$), windowed IACE included ($\approx$ moving average).