Thesis Schedule:

1. 'First Draft' thesis to Donnelly and Southergill Week of **Feb 10**.
2. Revised thesis to Committee week of **Mar 9** (pre-spring break).
3. Thesis Defense week of **April 13**.
4. Final thesis and docs to Southergill week of **April 20**.
5. Other tasks:

   Complete other graduation forms

   Book room for defense

   Get EIT references

Recent Progress:

1. Work started on Delay Agent
2. Addition of optional delay to tgov1
3. Initial Delay Agent tests
4. Registered for graduation
5. Branch Flow calculation correction

   New calculations:

$$I = \frac{V_S e^{j\delta_S} - V_R e^{j\delta_R}}{\sqrt{3}(R + jX)} \tag{1}$$

$$P = \sqrt{3} V_S |I| \cos(\delta_S - \angle I) \tag{2}$$

$$Q = \sqrt{3} V_S |I| \sin(\delta_S - \angle I) \tag{3}$$

   Old calculations:

$$P = \frac{V_R V_S}{X} \sin(\delta_S - \delta_R) \tag{4}$$

$$Q = \frac{V_R}{X} \left(V_S \cos(\delta_S - \delta_R) - V_R \right) \tag{5}$$

$$I = \frac{|P + jQ|}{V_R \sqrt{3}} \tag{6}$$

6. GitHub updated: `https://github.com/thadhaines/`
7. Uploaded to PyPI: `https://pypi.org/project/PSLTDSim/`

Current Tasks:

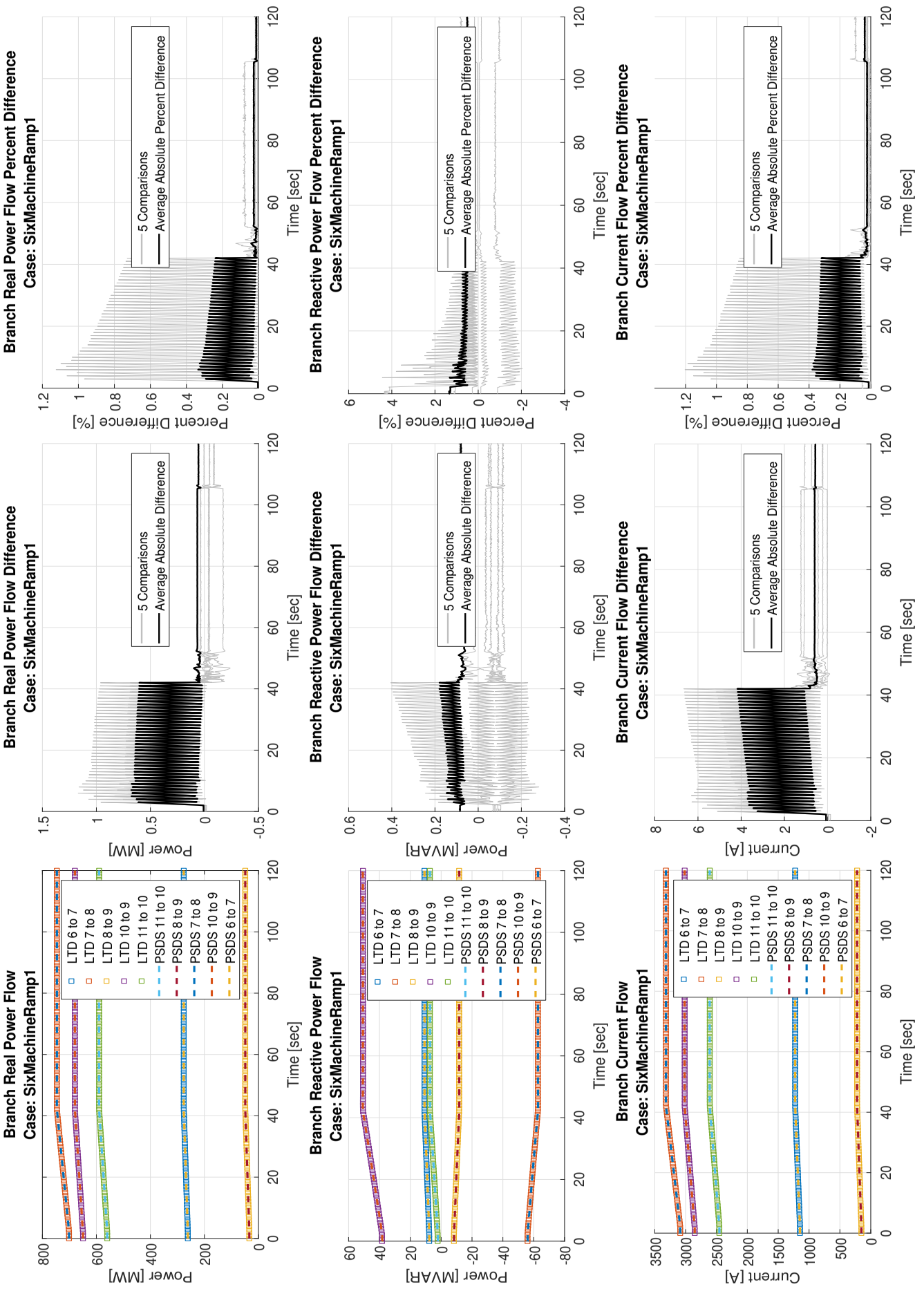
1. Work on gov delay scenario?
2. Create daily load cycle agent to read EIA data (hourly forecast and demand values)
3. Solidify test cases for engineering problem
4. Update Code flowchart and finalize code
5. Thesis work
6. Accumulate Portland trip materials...

Current Questions:

1. Cases to focus on for thesis?

   gov Vs AGC?

   delays?


Branch Real Power Flow
Case: SixMachineRamp1
Power [MW]
Time [sec]
LTD 6 to 7
LTD 7 to 8
LTD 8 to 9
LTD 10 to 9
LTD 11 to 10
PSDS 11 to 10
PSDS 8 to 9
PSDS 7 to 8
PSDS 10 to 9
PSDS 6 to 7
Branch Real Power Flow Difference
Case: SixMachineRamp1
Power [MW]
Time [sec]
5 Comparisons
Average Absolute Difference
Branch Real Power Flow Percent Difference
Case: SixMachineRamp1
Percent Difference [%]
Time [sec]
5 Comparisons
Average Absolute Percent Difference
Branch Reactive Power Flow
Case: SixMachineRamp1
Power [MVAR]
Time [sec]
Branch Reactive Power Flow Difference
Case: SixMachineRamp1
Power [MVAR]
Time [sec]
Branch Reactive Power Flow Percent Difference
Case: SixMachineRamp1
Percent Difference [%]
Time [sec]
Branch Current Flow
Case: SixMachineRamp1
Current [A]
Time [sec]
Branch Current Flow Difference
Case: SixMachineRamp1
Current [A]
Time [sec]
Branch Current Flow Percent Difference
Case: SixMachineRamp1
Percent Difference [%]
Time [sec]