AES Scope of Work

Madeline Macmillan

* NREL research mentor/research group: Caitlin Murphy/GPAC
  + I also work closely with Kelly Eurek who is also within GPAC, but he is not my official mentor
* Mines academic advisor: Morgan Bazilian
* Committee member #1: Alexandra Newman (Mines) (Not 100% confirmed, still emailing)
* Committee member #2: Benjamin Kroposki (NREL) (Not 100% confirmed, still emailing)
* Committee chair: Pablo Tabares (Mines) (Not 100% confirmed, still emailing)
* 2021-22 academic year goals:
  + Wrap up four (4) papers that are currently in the pipeline.
    - Three (3) of the papers are completely written and are somewhere in the review process (whether it be the NREL internal review process or the journal review process)
  + Present at another conference where I can connect with peers in my research space, share my work, and gain experience
  + Wrap up the NREL LVAT project to value resilience improvements for a civic center
  + Continue contributing to ReEDS development and accessibility
  + Begin modelling formulation brainstorming, implementation, and analysis!
* Upcoming presentations: nothing official
  + Past presentation: INFORMS 2020 Conference on implementing a resilience metric within OSeMOSYS
* Publications in process:
  + Literature review on resilience of long-duration outages (writing not complete so no official title)
  + *Solving a large energy system optimization model using an open-source solver*
  + *Metrics for Informing Energy Resilience Policies for System Planning and Operations*
  + *Exploring definitions and inclusion of resilience against acute weather events in power system models*
* Anticipated PhD milestones
  + Thesis proposal: before the end of the 2021 fall semester
  + Preliminary defense: December 2022
  + Defense: May 2023