

Automatic Generation Control Minutes  
2/23/2016

- Master Controller
  - Continue research
    - AGC
    - Governor Control
    - Feedback
  - Articles:
    - AGC of an Interconnected Hydrothermal Power System (also includes hydro simulation)
      - State Space Representation
      - Matlab simulation
        - 422- check in text (Thomas Overbye) to model system as in in article
    - A Review on Hydropower Plant Models and Control
      - Hydro plant Models
      - Governor
      - Plant Controllers
        - Go to work cited to review related articles
        - Implement PID controllers into system (good place to start), although there could be other programs to be used as well.
        - The basic law of control is the control will never be any better than the knowledge of your system.
- Interview Questions
  - Sent to Avista
- Due Dates
  - Logbooks – Friday 2/26
  - Team Logbook – Friday 2/26
- Other Information:
  - March 8<sup>th</sup> tour of hydropower dam talk to Pavan. Snapshot day will need to be rescheduled
  - Talk to Pavan regarding the network between the generators as he has already modeled the entire system and the generators interconnection is a subset of this.
  - We're still waiting on a response from Avista for our project proposal and interview questions
- To do:
  - Research about if the hospital's backup generators can sync to the grid
  - Develop a control loop of the system and model it with both generators
  - Get all the information we can from Avista (May need to get a background check)

- Research/questions:
  - Is it common practice in frequency generation for the generators to operate above their nominal operating speed?
  - Our system is separate from the normal NW main grid, how much above nominal rated frequency can we sync?
  - Is our system required to operate at 60 HZ? Can we operate it at a different frequency level? 30 Hz?