

Avista Micro-grid AGC Minutes
4/12/2016

- Conceptual Research → Questions
 - Do we need to model the exciter if we have the I_f and E_a curve?
 - Graph represents steady state, how will we represent possible changes to the system?
 - Do we want to know changes to the system?
 - Transient graphs have scales that need multiplication by 10.
 - 421/422 book has exciter models → review

 - Should we adjust I_f for frequency control or for AVR (fast-decoupled load flow; i.e. the separation between $I_f \rightarrow |E_a| \rightarrow Q$ and the angle between E_a and $V_t \rightarrow \text{Power} \rightarrow \text{speed}$?
 - Back to flow for controlling real power/speed, but maybe I_f for small variations of frequency?

 - How should we control power/speed if I_f is decoupled, will it still vary the speed enough?

 - Reference material for synchronous generators and representing them their characteristics as gains/transfer functions
 - 421/422 book
 - Mechanical analogues reference:
 - System Dynamics: Modeling, Simulation, and Control of Mechatronic Systems 5th Edition – Chapter 4