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GE509

GE509 Project

I have sought out to obtain high-frequency generation and price data for a subset of the dams. It looks like short of a FOIA request I'm going to be hard pressed to find this information on anything but the shortest of time periods (hourly for 1 week, Army Corps of Engineers). That said, I will present a pair of contingent models for review.

Models A: In the event I cannot obtain high-frequency data

During the course I have been reviewing the form of my current model. At present I'm using a model of the form: (y ~ Xb | z), (z ~ Xb,z) with the state transition model being a multinomial logit. Currently I believe I need to incorporate some of the physical constraints of the system. For one, it's reasonable to bound the generation at 0 and 100% capacity. For another, based on the literature many dams share flow with no ability to store water intertemporally. Therefore it may be easier to construct an intermediate variable, flow, and use flow to inform production on a handful of dams.  
  
Flow z: z ~ (price, temperature, runoff) with z >0  
Generation: y\_i ~ z