

From: Arnold Mesick  
Subject: Modeling Taum Sauk Reservoir  
Date: September 30, 2021  
Time: 8:05 a.m.  
To: Dr. Steve Hoffmann

---



Dear Dr. Hoffmann,

I am one of the senior engineers of Ameren Missouri. We are a power company that manages the Taum Sauk Reservoir. We are reaching out to you to engage your engineering students in helping with a modeling project. Safety and education are very important to us. Hence, we have started to implement a crowd-sourcing approach to ensure safety of people who live around our reservoirs by engaging young engineers in creating models. The mathematical models are important to calculate power generation, but more importantly to avoid accidents due to overfilling the reservoirs especially in rainy seasons.

We are asking you to create and evaluate mathematical models that represent the relationship between reservoir water height and the volume for the Upper Taum Sauk Reservoir and ultimately to calculate generated power as a function of Upper reservoir height. These models will be reviewed and potentially used by our associates with different job responsibilities and hence have to be easy to use by those with or without an engineering background. In addition, the use of MS Excel helps with easy transferability of the models and calculations.

We request that the models are presented in a Technical Brief and the calculations are detailed in Excel spreadsheets. In addition, key inputs and outputs should be presented in multiple units so we can pick and select from those that best align with our needs.

We regularly publish our data on our website.

Please let us know if you are able to help.

Thanks,

Arnold Mesick  
Senior Engineer