

A regression analysis of the prices of ancillary services in the Texas market

Jingwei Meng

ABSTRACT

Ancillary services are an important part of the electricity market to keep the system in balance. This work studies ancillary services in the ERCOT electricity market. Having a better understanding of the relationship of ancillary services to other elements including the generation levels of the various resources, the Day-Ahead Market Price, quantities of ancillary services, and changes in market rules as specified in Nodal Protocol Revision Requests (NPRRs) is meaningful to the market. This paper uses a general linear regression model, a Panel Data Model and Seemingly Unrelated Regressors and finds that Regulation Down is different from other three ancillary services in general. The results shows that coal's generation levels and NPRR352 have a significant negative influence. The Day Ahead Market Price has a significant positive influence on all the ancillary services. Effects of other elements are different.

Advisor: Ross Baldick (Signed Name)
(Printed Name)