Presentation of Robert Blohm to NAESB IIPTF of "A CPS1-Driven Market for the Frequency Control Contribution of Inadvertent Interchange," 2003 September 16, Austin, Texas.

Comment of Mark Lively, Utility Economic Engineers, MbeLively@aol.com

The CPS1-Driven Market presented by Robert Blohm addresses only the "frequency component" of inadvertent interchange. I note that NERC's Joint Inadvertent Interchange Task Force concluded that the value of inadvertent interchange was impacted by a combination of these three values, not just the frequency component.

Even in regard to just the "frequency component," Robert and Howard Illian, the other developer of the CPS1-Driven Market for Frequency, could not agree on how to calculate Beta, the key component for charging for frequency under the CPS1-Driven Market for Frequency.

- Robert used four data points in a calculation of the ratio of average of inadvertent interchange to average frequency error, 9/2=4.5. The result is that the sample Balancing Authority would have a positive Beta and pay for poor performance under Robert's analysis of the data.
- Howard said over the phone that the appropriate method is regression analysis, which gives a negative slope of -0.65 or -0.50 depending on whether or not the regression is forced through the origin. The result here is that the sample Balancing Authority would have a negative Beta and would be paid for frequency.

Robert subsequently distributed an analysis of the data but did not conclude which approach was appropriate.

Howard also said that little data will appear in the 2nd (top left) and 4th (bottom right) quadrants. Howard offered to collect and report actual data. Based on my understanding of the meaning of the data, data in the 1st and 4th quadrants will offset each other for the Balancing Authorities in an interconnection, as will the data in the 2nd and 3rd. My gut feel is that Howard's data will have r-squares for the regression analysis that are minimal and Betas that are insignificantly different from zero.

Robert aptly compared his CPS1-Driven Market for Frequency with the market for pollution credits, where no one cares when the pollution occurs. We certainly care if all of the frequency error occurs at the same time, though we might not have the same concern for all pollution occurring in a single time window.

I believe that the CPS-1 Driven Market for Frequency would result in unstable, bimodal prices. When system frequency response has been good for a pricing period, no one would see the need to obtain credits and the price would be close to zero. When system frequency response has been worse than the standard for a pricing period, no one will be willing to sell credits for much less than the penalty price set by NERC.