**MidAmerican Energy Company**
**Response To Illinois Commerce Commission Data Request**
**Docket No. 09-0312**

Responder Name: Kathleen C. McShane
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**Requested Data**:

JF-3.03 Please provide a detailed explanation of what Ms. McShane means by her statement that "greater confidence" can be placed in the weekly betas on page 8 of her rebuttal testimony (MidAmerican Exhibit KCM 2.0).

**Response:**

Estimates of beta are derived using regression analysis. The quality of the regression can be determined by examining the statistical parameters of the regression, e.g., $R^2$ and standard error. The $R^2$ of the regression provides an estimate of the proportion of risk that can be attributed to systematic factors. The statistical reliability of an estimated coefficient (or beta) is measured by its standard error. By calculating a confidence interval equal to the estimated beta plus or minus two standard errors, the confidence in a particular estimate of beta can be measured. Specifically, a confidence interval equal to plus or minus two standard errors from the estimated value indicates that there is a 95% chance, in repeated samplings, that the true value of beta lies within the calculated interval. Therefore, the smaller the standard error, the smaller the confidence interval and the greater confidence can be had in any particular result. The table below presents the unadjusted betas and standard errors from Table 3 of Ms. McShane's rebuttal testimony as well as the upper and lower bounds of the 95% confidence intervals calculated from those data. It is clear from the table that the betas calculated using weekly observations have narrower confidence intervals compared to those calculated using monthly data and, therefore, greater confidence can be placed in the beta estimated using weekly data.

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| 5-Year Period Ending | Weekly Observations | | Confidence Interval | | |
|---|---|---|---|---|---|
| | Unadjusted Betas | Standard Error | Lower Bound | Upper Bound | Range |
| 5-Dec | 0.67 | 0.015 | 0.64 | 0.70 | 0.06 |
| 6-Dec | 0.75 | 0.014 | 0.72 | 0.78 | 0.06 |
| 7-Dec | 0.8 | 0.013 | 0.77 | 0.83 | 0.05 |
| 8-Dec | 0.62 | 0.018 | 0.58 | 0.66 | 0.07 |
| 9-Jul | 0.60 | 0.020 | 0.56 | 0.64 | 0.08 |
| 5-Year Period Ending | Monthly Observations | | | | |
| | Unadjusted Betas | Standard Error | Lower Bound | Upper Bound | Range |
| 5-Dec | 0.47 | 0.029 | 0.41 | 0.53 | 0.12 |
| 6-Dec | 0.47 | 0.028 | 0.41 | 0.53 | 0.11 |
| 7-Dec | 0.27 | 0.029 | 0.21 | 0.33 | 0.12 |
| 8-Dec | 0.19 | 0.035 | 0.12 | 0.26 | 0.14 |
| 9-Jul | 0.20 | 0.035 | 0.13 | 0.27 | 0.14 |