A Comparison of Natural Gas Spot Price Linear Regression Forecasting Models

Table 5 Best Five Out-of-Sample Equations vs EIA Core Model

Equation	Added Variables (#) indicates that this variable is significant to the #% critical value (-) indicates that this variables coefficient was negative	RANK of Equation from Methods C and D based on "Out-of-Sample" Regression Statistics	Multi-collinearity w/o constant	Multi-collinearity including Constant	R-squared	Adj R-squared
1 with OLS	SP [-4] (5) STORDEV TDEVAL4 (5) (-)	**25**	3.32	11.56	0.157	0.127
23 with OLS	SP[-4] F2LAG4 (5) SPOILL4 (5)	**1**	11.30	15.42	0.522	0.504
4 with OLS	SP [-4] (10) STORDEV (-) F3LAG4 (5) TDEVAL4 (-)	**2**	10.88	19.77	0.397	0.367
3 with OLS	SP [-4] STORDEV (-) F2LAG4 (5) TDEVAL4 (-)	**3**	12.31	17.98	0.452	0.424
9 with OLS	SP [-4] STORDEV F2LAG4 (5) SPOILL4 (5) WTTEDL4	**4**	14.40	20.81	0.522	0.492
7 with OLS	STORDEV F2LAG4 (5) SPOILL4 (5) TDEVAL4 (-)	**5**	14.27	21.35	0.522	0.492

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Equation	Akaike Information	Amemiya Prediction	h Statistic	Sum of Square of Difference	Root Mean Squared Error	Sum of Absolute Value of Differences	Out of Sample Forecast Value 11/20/00 - 02/16/01 Sum of Square of Difference	Root Mean Squared Error	Sum of Absolute Value of Differences	Durbin Watson
1 with OLS	-1.14	0.32	10.820	23.53	0.523	35.52	271.41	4.119	59.68	0.444
23 with OLS	-1.70	0.18	7.846	14.24	0.407	24.67	94.35	2.428	29.53	0.635
4 with OLS	-1.45	0.23	9.006	17.19	0.447	27.04	66.86	2.044	26.15	0.523
3 with OLS	-1.54	0.21	8.833	15.76	0.428	26.42	76.78	2.191	29.1	0.572
9 with OLS	-1.66	0.19	8.086	14.25	0.407	24.65	94.09	2.425	29.48	0.634
7 with OLS	-1.66	0.19	8.078	14.27	0.407	24.72	95.85	2.448	29.8	0.636