FAIR AND PROSPECTIVE ASSESSMENT OF EMPIRE'S HEDGING

ACTIVITY?

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On page 12 of Mr. Hyneman's Direct Testimony, he includes the EIA publication (Table BAM-1) of NYMEX Henry Hub spot prices from January 1997 – April 2017 to support his supposition that changes in the natural gas market have created an environment in which hedging is imprudent, and, since Empire has continued to hedge the natural gas needs of natural gas generating units, it has engaged in imprudent and unreasonable behavior.

Table BAM-1

	EK SERVI		of Grand	1345			at Ameri					14.
1997	3,45	2.15	1.89	2.03	2.25	2.20	2.19	2,49	2,88	3.07	3,01	2.3
1998	2.09	2.23	2,24	2.43	2.14	2.17	2.17	1.85	2.02	1.91	2.12	1.7
1999	1.85	1.77	1.79	2,15	2.26	2.30	2.31	2,80	2.55	2,73	2.37	2.3
2000	2.42	2.66	2.79	3,04	3.59	4.29	3.99	4.43	5.06	5.02	5.52	8.5
2001:	8.17	5.61	5.23	5.19	4.19	3.72	3.11	2.97	2.19	2,46	2.34	2.3
2002	2,32	2.32	3.03	3.43	3.50	3,26	2.99	3.09	3.55	4.13	4.04	4.7
2003	5.43	7.71	5.93	5.26	5.81	5.82	5.03	4.99	4.62:	4.63	4.47	6.1
2004	6.14	5.37	5,39	5.71	6.33	6.27	5.93	5.41	5.15	6.35	6.17	6,5
2005	6.15	6.14	6.96	7.16	6.47	7.18	7.63	9.53	11.75	13.42.	10.30	13.0
2006	8.69	7.54	6.89	7.16	6,25	6.21	6.17	7.1-4	4.90	5,85	7.41	6.7
2007-	6,55	8.00	7.11	7.60	7.64	7.35	6.22	6.22	6.08	6.74	7.10	7.1
2008	7.99	8.54	9.41	10.18	11.27	12.69	11.09	8.26	7.67	6.74	6.68	5.8
2009	5.24	4.52	3.96	3.50	3.83	3.80	3.38	3,14	2.99	4.01	3.66	5.3
2010	5.83	5,32	4.29	4.03	4.14	4,80	4.63	4.32	3.89	3.43	3.71	4.2
2011	4.49	4.09	3.97	4.24	4.31	4.54	4.42	4.06	3.90	3.57	3,24	3.1
2012	2.67	2.51	2.17	1,95	2,43	2,46	2.95	2,84	2,85	3,32	3.54	3.3
2013	3.33	3,33	3.81	4,17	4,04	3,83	3.62	3.43	3,62	3,68	3.64	4.2
2014	4.71	6,00	4.90	4.66	4.58	4.59	4.05	3.91	3.92	3.78	4.12	3.4
2015	2.99	2.87	2,83	2.61	2.85	2.78	2.84	2.77	2.66	2.34	2.09	1.9
2016	2,28	1.99	1.73	1.92	1.92	2.59	2,82	2.82	2,99	2.98	2.55	3.5
2017	3.30	2,85	2,88	3.10			_,				,	

Mr. Hyneman once again fails to acknowledge the "perfect information" he has when making the determination that natural gas prices were going to continue to decline and remain stable. For example, below is Table BAM-2 which is depicting the NYMEX Henry Hub <u>futures</u> price near the end of each calendar month for 2010 and 2011, which is the timeframe when the higher priced hedges during the audit period were executed.

Table BAM-2

	. 1	agricultural a			2015	NYMEX Her	ry Hub Fut	ures as of	A.A. (2.3)		1,454	30 000
Futures Months	1/29/2010	2/26/2010	3/31/2010	4/30/2010	5/28/2010	6/30/2010	7/30/2010	8/27/2010	9/30/2010	10/29/2010	11/26/2010	12/31/2010
1/1/2015	7.405	7.200	7.060	7.094	6.972	6.739	6.264	6.376	5,929	5.933	6,122	5.983
2/1/2015	7.385	7.175	7.025	7.054	6,927	6.694	6.209	6.331	5.884	5.888	6.082	5,938
3/1/2015	7.170	6.955	6.825	6.854	6.727	6.494	6.029	6,156	5.709	5.713	5.912	5.760
4/1/2015	6.570	6.365	6.345	6.384	6.247	6.049	5.594	5.821	5.344	5.348	5.562	5.402
5/1/2015	6.525	6.320	6,305	6.349	6.212	6.019	5,569	5,806	5.334	5.333	5.549	5,390
6/1/2015	6.590	6.380	6.365	6.407	6.270	6.077	5,604	5.836	5.362	5.355	5.573	5,410
7/1/2015	6.665	6.455	6.440	6.479	6.340	6.147	5.656	5.881	5,404	5.390	5.613	5,452
8/1/2015	6.730	6.520	6,505	6.544	6.403	6.210	5.704	5.929	5.452	5,430	5.653	5.492
9/1/2015	6,765	6.555	6,540	6.577	6.436	6.243	5.729	5.954	5,477	5.450	5.673	5.512
10/1/2015	6.870	6,660	6.645	6.679	6.538	6.345	5.814	6.034	5.557	5.528	5.748	5.587
11/1/2015	7.125	6.910	6,895	6,929	6.776	6.580	6.014	6.224	5.742	5.708	5.926	5.757
12/1/2015	7.400	7.185	7.175	7.209	7.038	6.840	6.234	6.434	5.947	5.910	6.141	5.972

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Futures Months	1/28/2011	2/25/2011	3/31/201	4/29/2013	5/27/2011	6/30/2011	7/29/2011	8/26/2011	9/30/201:	1 10/28/2011	11/25/2011	12/31/2011
1/1/2015	5.871	5,966	6.244	6.167	6.137	5,889	5.797	5.688	5.567	5.484	5.118	4.733
2/1/2015	5.838	5.936	6.224	6.142	6.117	5.855	5.765	5.653	5.532	5.450	5.083	4.705
3/1/2015	5,706	5.826	6.134	6.057	6.042	5.771	5.683	5.570	5.447	5.364	4.998	4.622
4/1/2015	5.431	5.576	5.864	5.757	5.757	5.486	5.423	5.311	5.217	5.154	4.775	4.444
5/1/2015	5.421	5,566	5.879	5.777	5.775	5.501	5.436	5.321	5.227	5.164	4.783	4.454
6/1/2015	5.441	5.586	5,909	5.807	5.815	5.536	5.469	5.349	5.255	5.192	4.811	4.481
7/1/2015	5.481	5.626	5.954	5.850	5.860	5.576	5,505	5,384	5.290	5.227	4.848	4.518
8/1/2015	5.514	5,661	5.994	5.882	5.897	5,609	5.535	5.408	5.312	5.249	4.870	4.538
9/1/2015	5.531	5,676	6.009	5.892	5.912	5.624	5.546	5.415	5.319	5.256	4.875	4.541
10/1/2015	5.601	5.746	6.069	5,944	5.962	5.672	5.588	5.445	5.349	5.286	4.905	4.576
11/1/2015	5.743	5.881	6.224	6.089	6.114	5.810	5.723	5.575	5.472	5.408	5.017	4.671
12/1/2015	5.948	6.091	6.464	6.329	6.364	6.042	5.957	5.798	5,697	5.635	5,244	4.881

The top row provides the last business day of each month for 2010 and 2011, with the applicable 2015 monthly forward curves below each date. These tables capture the natural gas market projections for 2015 based on information that would have been known at the time some of the longer term hedges from the audit period were executed. It is clear from this table that the \$1.93 - \$2.99 monthly spot gas provided in Mr. Hyneman's table (Table BAM-1) for 2015 would not have been predicted based on the forward curves. Furthermore, what information we could gather from Mr. Hyneman's historical NYMEX spot prices (Table BAM-1) is that the last period in which NYMEX spot prices were in the low \$2.00 to high \$1.00 range was in 1998 & 1999, which was followed by a period of approximately 9 years in which prices increased. As stated on page 2 of the Public Utilities Fortnightly article relied on by Mr. Hyneman: