# AN ANALYSIS OF THE COST OF CAPITAL

FOR

AQUILA, INC. d/b/a AQUILA NETWORKS MPS AND AQUILA NETWORKS L&P

CASE NO. ER-2005-0436

**SCHEDULES** 

BY

# **DAVID MURRAY**

# UTILITY SERVICES DIVISION

MISSOURI PUBLIC SERVICE COMMISSION

OCTOBER 2005

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### Federal Reserve Discount Rate and Federal Reserve Funds Rate Changes

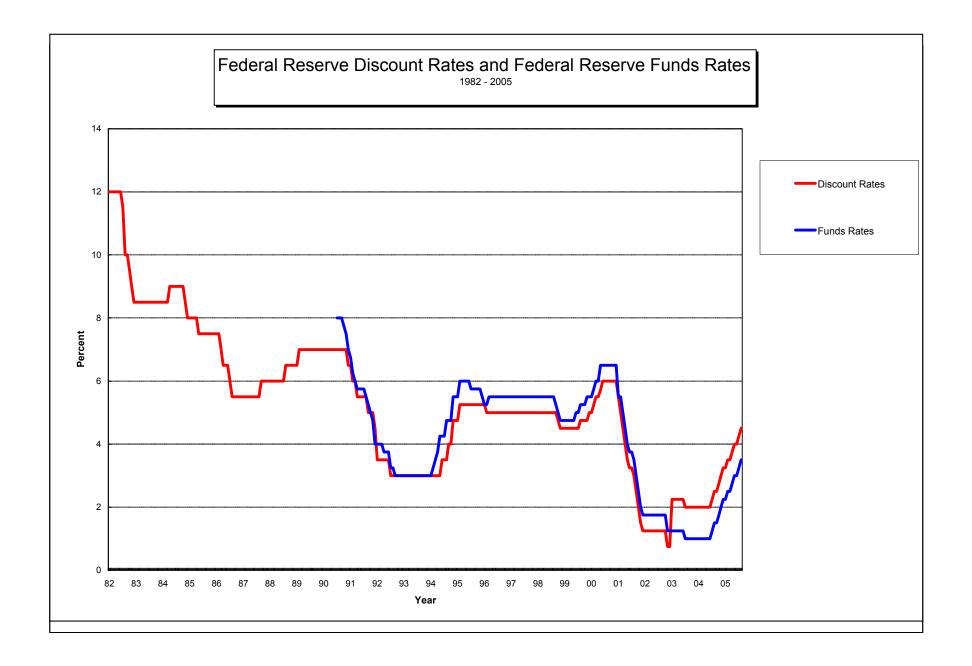
	Discount	Funds		Discount	Funds
Date	Rate	Rate	Date	Rate	Rate
07/19/82	11.50%	1010	02/02/00	5.25%	5.75%
07/31/82	11.00%		03/21/00	5.50%	6.00%
08/14/82	10.50%		05/19/00	6.00%	6.50%
08/26/82	10.00%		01/03/01	5.75%	6.00%
10/10/82	9.50%		01/04/01	5.50%	6.00%
11/20/82	9.00%		01/31/01	5.00%	5.50%
12/14/82	8.50%		03/20/01	4.50%	5.00%
01/01/83	8.50%		04/18/01	4.00%	4.50%
12/31/83	8.50%		05/15/01	3.50%	4.00%
04/09/84	9.00%		06/27/01	3.25%	3.75%
11/21/84	8.50%		08/21/01	3.00%	3.50%
12/24/84	8.00%		09/17/01	2.50%	3.00%
05/20/85	7.50%		10/02/01	2.00%	2.50%
03/07/86	7.00%		11/06/01	1.50%	2.00%
04/21/86	6.50%		12/11/01	1.25%	1.75%
07/11/86	6.00%		11/06/02	0.75%	1.25%
08/21/86	5.50%		** 01/09/03	2.25%	1.25%
09/04/87	6.00%		06/25/03	2.00%	1.00%
08/09/88	6.50%		06/30/04	2.25%	1.25%
02/24/89	7.00%		08/10/04	2.50%	1.50%
* 07/13/90		8.00%	09/21/04	2.75%	1.75%
10/29/90		7.75%	11/10/04	3.00%	2.00%
11/13/90		7.50%	12/14/04	3.25%	2.25%
12/07/90		7.25%	02/02/05	3.50%	2.50%
12/18/90		7.00%	03/22/05	3.75%	2.75%
12/19/90	6.50%		05/03/05	4.00%	3.00%
01/09/91		6.75%	06/30/05	4.25%	3.25%
02/01/91	6.00%	6.25%	08/09/05	4.50%	3.50%
03/08/91		6.00%			
04/30/91	5.50%	5.75%			
08/06/91		5.50%			
09/13/91	5.00%	5.25%			
10/31/91		5.00%			
11/06/91	4.50%	4.75%			
12/06/91		4.50%			
12/20/91	3.50%	4.00%			
04/09/92	0.000/	3.75%			
07/02/92	3.00%	3.25%			
09/04/92		3.00%			
01/01/93	No Changes	No Changes			
12/31/93	No Changes	No Changes			
02/04/94 03/22/94		3.25% 3.50%			
03/22/94 04/18/94		3.50%			
05/17/94	3.50%	3.75% 4.25%			
08/16/94	4.00%	4.25%			
11/15/94	4.00%	4.75% 5.50%			
02/01/95	5.25%	<u>5.50%</u> 6.00%			
07/06/95	0.20/0	5.75%			
12/19/95		5.50%			
01/31/96	5.00%	5.25%			
03/25/97	0.0070	5.50%			
12/12/97	5.00%	0.0070			
01/09/98	5.00%				
03/06/98	5.00%				
09/29/98		5.25%			
10/15/98	4.75%	5.00%			
11/17/98	4.50%	4.75%			
06/30/99	4.50%	5.00%			
08/24/99	4.75%	5.25%			
11/16/99	5.00%	5.50%			

\* Staff began tracking the Federal Funds Rate.

\*\*Revised discount window program begins. Reflects rate on primary credit. This revised discount window policy results in incomparability of the discount rates after January 9, 2003 to discount rates before January 9, 2003.

Sources: Federal Reserve Bank of New York: http://www.newyorkfed.org/aboutthefed/fedpoint/fed18.html (1/1/2000 through 8/9/2005). MGE direct testimony in Case No.GR-2004-0209 (all data prior to 1/1/2000).

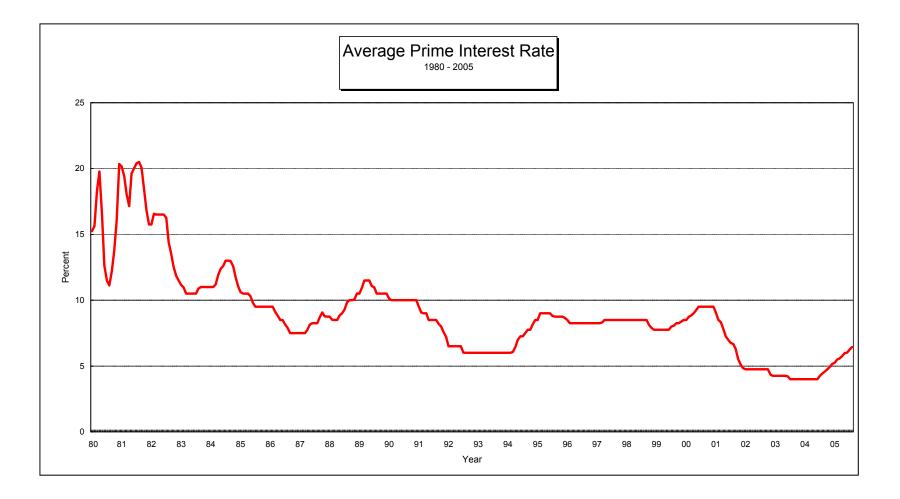
Note: Interest rates as of December 31 for each year are underlined.



## Average Prime Interest Rates

Mo/Year Jan 1980	Rate (%) 15.25	Mo/Year Jan 1984	Rate (%) 11.00	Mo/Year Jan 1988	Rate (%) 8.75	Mo/Year Jan 1992	Rate (%) 6.50	Mo/Year Jan 1996	Rate (%) 8.50	Mo/Year Jan 2000	Rate (%) 8.50	Mo/Year Jan 2004	Rate (%) 4.00
Feb	15.63	Feb	11.00	Feb	8.51	Feb	6.50	Feb	8.25	Feb	8.73	Feb	4.00
Mar	18.31	Mar	11.21	Mar	8.50	Mar	6.50	Mar	8.25	Mar	8.83	Mar	4.00
Apr	19.77	Apr	11.93	Apr	8.50	Apr	6.50	Apr	8.25	Apr	9.00	Apr	4.00
May	16.57	May	12.39	May	8.84	May	6.50	May	8.25	May	9	May	4.00
Jun	12.63	Jun	12.60	Jun	9.00	Jun	6.50	Jun	8.25	Jun	9.50	Jun	4.00
Jul	11.48	Jul	13.00	Jul	9.29	Jul	6.02	Jul	8.25	Jul	9.50	Jul	4.25
Aug	11.12	Aug	13.00	Aug	9.84	Aug	6.00	Aug	8.25	Aug	9.50	Aug	4.43
Sep	12.23	Sep	12.97	Sep	10.00	Sep	6.00	Sep	8.25	Sep	9.50	Sep	4.58
Oct	13.79	Oct	12.58	Oct	10.00	Oct	6.00	Oct	8.25	Oct	9.50	Oct	4.75
Nov	16.06	Nov	11.77	Nov	10.05	Nov	6.00	Nov	8.25	Nov	9.50	Nov	4.93
Dec	20.35	Dec	11.06	Dec	10.50	Dec	6.00	Dec	8.25	Dec	9.50	Dec	5.15
Jan 1981	20.16	Jan 1985	10.61	Jan 1989	10.50	Jan 1993	6.00	Jan 1997	8.26	Jan 2001	9.05	Jan 2005	5.25
Feb	19.43	Feb	10.50	Feb	10.93	Feb	6.00	Feb	8.25	Feb	8.50	Feb	5.49
Mar	18.05	Mar	10.50	Mar	11.50	Mar	6.00	Mar	8.30	Mar	8.32	Mar	5.58
Apr	17.15	Apr	10.50	Apr	11.50	Apr	6.00	Apr	8.50	Apr	7.80	Apr	5.75
May	19.61	May	10.31	May	11.50	May	6.00	May	8.50	May	7	May	5.98
Jun	20.03	Jun	9.78	Jun	11.07	Jun	6.00	Jun	8.50	Jun	6.98	Jun	6.01
Jul	20.39	Jul	9.50	Jul	10.98	Jul	6.00	Jul	8.50	Jul	6.75	Jul	6.25
Aug	20.50	Aug	9.50	Aug	10.50	Aug	6.00	Aug	8.50	Aug	6.67	Aug	6.44
Sep	20.08	Sep	9.50	Sep	10.50	Sep	6.00	Sep	8.50	Sep	6.28		
Oct	18.45	Oct	9.50	Oct	10.50	Oct	6.00	Oct	8.50	Oct	5.53		
Nov	16.84	Nov	9.50	Nov	10.50	Nov	6.00	Nov	8.50	Nov	5.10		
Dec	15.75	Dec	9.50	Dec	10.50	Dec	6.00	Dec	8.50	Dec	4.84		
Jan 1982	15.75	Jan 1986	9.50	Jan 1990	10.11	Jan 1994	6.00	Jan 1998	8.50	Jan 2002	4.75		
Feb	16.56	Feb	9.50	Feb	10.00	Feb	6.00	Feb	8.50	Feb	4.75		
Mar	16.50	Mar	9.10	Mar	10.00	Mar	6.06	Mar	8.50	Mar	4.75		
Apr	16.50	Apr	8.83	Apr	10.00	Apr	6.45	Apr	8.50	Apr	4.75		
May	16.50	May	8.50	May	10.00	May	6.99	May	8.50	May	4.75		
Jun	16.50	Jun	8.50	Jun	10.00	Jun	7.25	Jun	8.50	Jun	4.75		
Jul	16.26	Jul	8.16	Jul	10.00	Jul	7.25	Jul	8.50	Jul	4.75		
Aug	14.39	Aug	7.90	Aug	10.00	Aug	7.51	Aug	8.50	Aug	4.75		
Sep	13.50	Sep	7.50	Sep	10.00	Sep	7.75	Sep	8.49	Sep	4.75		
Oct	12.52	Oct	7.50	Oct	10.00	Oct	7.75	Oct	8.12	Oct	4.75		
Nov	11.85	Nov	7.50	Nov	10.00	Nov	8.15	Nov	7.89	Nov	4.35		
Dec	11.50	Dec	7.50	Dec	10.00	Dec	8.50	Dec	7.75	Dec	4.25		
Jan 1983	11.16	Jan 1987	7.50	Jan 1991	9.52	Jan 1995	8.50	Jan 1999	7.75	Jan 2003	4.25		
Feb	10.98	Feb	7.50	Feb	9.05	Feb	9.00	Feb	7.75	Feb	4.25		
Mar	10.50	Mar	7.50	Mar	9.00	Mar	9.00	Mar	7.75	Mar	4.25		
Apr	10.50	Apr	7.75	Apr	9.00	Apr	9.00	Apr	7.75	Apr	4.25		
May	10.50	May	8.14	May	8.50	May	9.00	May	7.75	May	4.25		
Jun	10.50	Jun	8.25	Jun	8.50	Jun	9.00	Jun	7.75	Jun	4.22		
Jul	10.50	Jul	8.25	Jul	8.50	Jul	8.80	Jul	8.00	Jul	4.00		
Aug	10.89	Aug	8.25	Aug	8.50	Aug	8.75	Aug Sep	8.06	Aug	4.00 4.00		
Sep	11.00	Sep	8.70	Sep Oct	8.20	Sep	8.75 8.75		8.25 8.25	Sep	4.00		
Oct	11.00	Oct	9.07 8.78		8.00 7.58	Oct	8.75	Oct		Oct Nov	4.00		
Nov	11.00 11.00	Nov Dec	8.78	Nov Dec	7.58	Nov Dec	8.65	Nov Dec	8.37 8.50	Dec	4.00		
Dec	11.00	Dec	0.75	Dec	1.21	Dec	0.00	Dec	6.50	Dec	4.00		

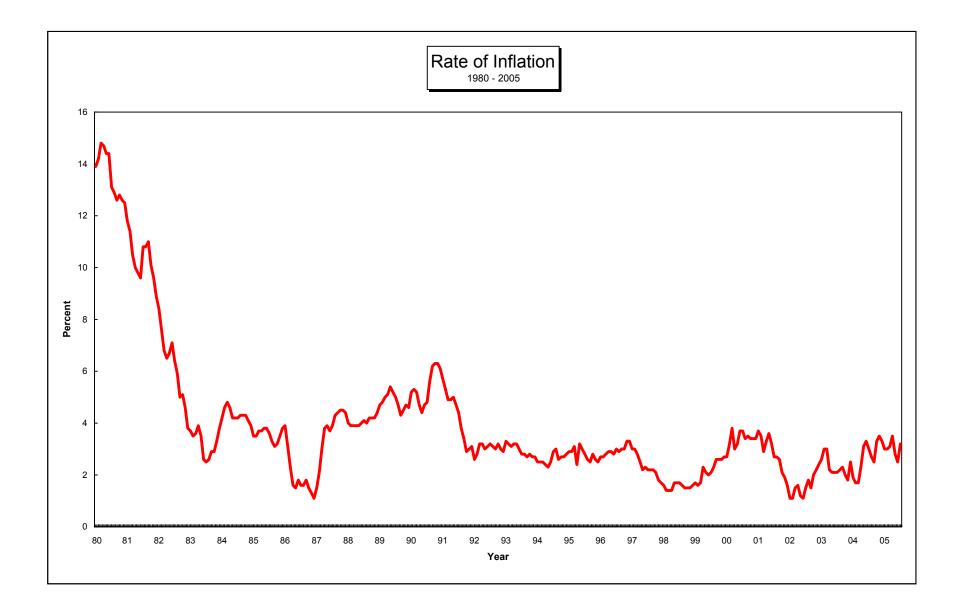
Source: St Louis Federal Reserve Bank: http://research.stlouisfed.org/fred2/data/MPRIME.txt



## Rate of Inflation

Mo/Year	Rate (%)												
Jan 1980	13.90	Jan 1984	4.20	Jan 1988	4.00	Jan 1992	2.60	Jan 1996	2.70	Jan 2000	2.70	Jan 2004	1.90
Feb	14.20	Feb	4.60	Feb	3.90	Feb	2.80	Feb	2.70	Feb	3.20	Feb	1.70
Mar	14.80	Mar	4.80	Mar	3.90	Mar	3.20	Mar	2.80	Mar	3.70	Mar	1.70
Apr	14.70	Apr	4.60	Apr	3.90	Apr	3.20	Apr	2.90	Apr	3.00	Apr	2.30
May	14.40	May	4.20	May	3.90	May	3.00	May	2.90	May	3.20	May	3.10
Jun	14.40	Jun	4.20	Jun	4.00	Jun	3.10	Jun	2.80	Jun	3.70	Jun	3.30
Jul	13.10	Jul	4.20	Jul	4.10	Jul	3.20	Jul	3.00	Jul	3.70	Jul	3.00
Aug	12.90	Aug	4.30	Aug	4.00	Aug	3.10	Aug	2.90	Aug	3.40	Aug	2.70
Sep	12.60	Sep	4.30	Sep	4.20	Sep	3.00	Sep	3.00	Sep	3.50	Sep	2.50
Oct	12.80	Oct	4.30	Oct	4.20	Oct	3.20	Oct	3.00	Oct	3.40	Oct	3.30
Nov	12.60	Nov	4.10	Nov	4.20	Nov	3.00	Nov	3.30	Nov	3.40	Nov	3.50
Dec	12.50	Dec	3.90	Dec	4.40	Dec	2.90	Dec	3.30	Dec	3.40	Dec	3.30
Jan 1981	11.80	Jan 1985	3.50	Jan 1989	4.70	Jan 1993	3.30	Jan 1997	3.00	Jan 2001	3.70	Jan 2005	3.00
Feb	11.40	Feb	3.50	Feb	4.80	Feb	3.20	Feb	3.00	Feb	3.50	Feb	3.00
Mar	10.50	Mar	3.70	Mar	5.00	Mar	3.10	Mar	2.80	Mar	2.90	Mar	3.10
Apr	10.00	Apr	3.70	Apr	5.10	Apr	3.20	Apr	2.50	Apr	3.30	Apr	3.50
Мау	9.80	May	3.80	May	5.40	May	3.20	May	2.20	May	3.60	May	2.80
Jun	9.60	Jun	3.80	Jun	5.20	Jun	3.00	Jun	2.30	Jun	3.20	Jun	2.50
Jul	10.80	Jul	3.60	Jul	5.00	Jul	2.80	Jul	2.20	Jul	2.70	Jul	3.20
Aug	10.80	Aug	3.30	Aug	4.70	Aug	2.80	Aug	2.20	Aug	2.70	Aug	3.60
Sep	11.00	Sep	3.10	Sep	4.30	Sep	2.70	Sep	2.20	Sep	2.60		
Oct	10.10	Oct	3.20	Oct	4.50	Oct	2.80	Oct	2.10	Oct	2.10		
Nov	9.60	Nov	3.50	Nov	4.70	Nov	2.70	Nov	1.80	Nov	1.90		
Dec	8.90	Dec	3.80	Dec	4.60	Dec	2.70	Dec	1.70	Dec	1.60		
Jan 1982	8.40	Jan 1986	3.90	Jan 1990	5.20	Jan 1994	2.50	Jan 1998	1.60	Jan 2002	1.10		
Feb	7.60	Feb	3.10	Feb	5.30	Feb	2.50	Feb	1.40	Feb	1.10		
Mar	6.80	Mar	2.30	Mar	5.20	Mar	2.50	Mar	1.40	Mar	1.50		
Apr	6.50	Apr	1.60	Apr	4.70	Apr	2.40	Apr	1.40	Apr	1.60		
May	6.70	May	1.50	May	4.40	May	2.30	May	1.70	May	1.20		
Jun	7.10	Jun	1.80	Jun	4.70	Jun	2.50	Jun	1.70	Jun	1.10		
Jul	6.40	Jul	1.60	Jul	4.80	Jul	2.90	Jul	1.70	Jul	1.50		
Aug	5.90	Aug	1.60	Aug	5.60	Aug	3.00	Aug	1.60	Aug	1.80		
Sep	5.00	Sep	1.80	Sep	6.20	Sep	2.60	Sep	1.50	Sep	1.50		
Oct	5.10	Oct	1.50	Oct	6.30	Oct	2.70	Oct	1.50	Oct	2.00		
Nov	4.60	Nov	1.30	Nov	6.30	Nov	2.70	Nov	1.50	Nov	2.20		
Dec	3.80	Dec	1.10	Dec	6.10	Dec	2.80	Dec	1.60	Dec	2.40		
Jan 1983	3.70	Jan 1987	1.50	Jan 1991	5.70	Jan 1995	2.90	Jan 1999	1.70	Jan 2003	2.60		
Feb	3.50	Feb	2.10	Feb	5.30	Feb	2.90	Feb	1.60	Feb	3.00		
Mar	3.60	Mar	3.00	Mar	4.90	Mar	3.10	Mar	1.70	Mar	3.00		
Apr	3.90	Apr	3.80	Apr	4.90	Apr	2.40	Apr	2.30	Apr	2.20		
May	3.50	May	3.90	May	5.00	May	3.20	May	2.10	May	2.10		
Jun	2.60	Jun	3.70	Jun	4.70	Jun	3.00	Jun	2.00	Jun	2.10		
Jul	2.50	Jul	3.90	Jul	4.40	Jul	2.80	Jul	2.10	Jul	2.10		
Aug	2.60	Aug	4.30	Aug	3.80	Aug	2.60	Aug	2.30	Aug	2.20		
Sep	2.90	Sep	4.40	Sep	3.40	Sep	2.50	Sep	2.60	Sep	2.30		
Oct	2.90	Oct	4.50	Oct	2.90	Oct	2.80	Oct	2.60	Oct	2.00		
Nov	3.30	Nov	4.50	Nov	3.00	Nov	2.60	Nov	2.60	Nov	1.80		
Dec	3.80	Dec	4.40	Dec	3.10	Dec	2.50	Dec	2.70	Dec	1.90		

Source: U.S. Dept of Labor, Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, Change for 12-Month Period, Bureau of Labor Statistics,



# Average Yields on Mergent's Public Utility Bonds

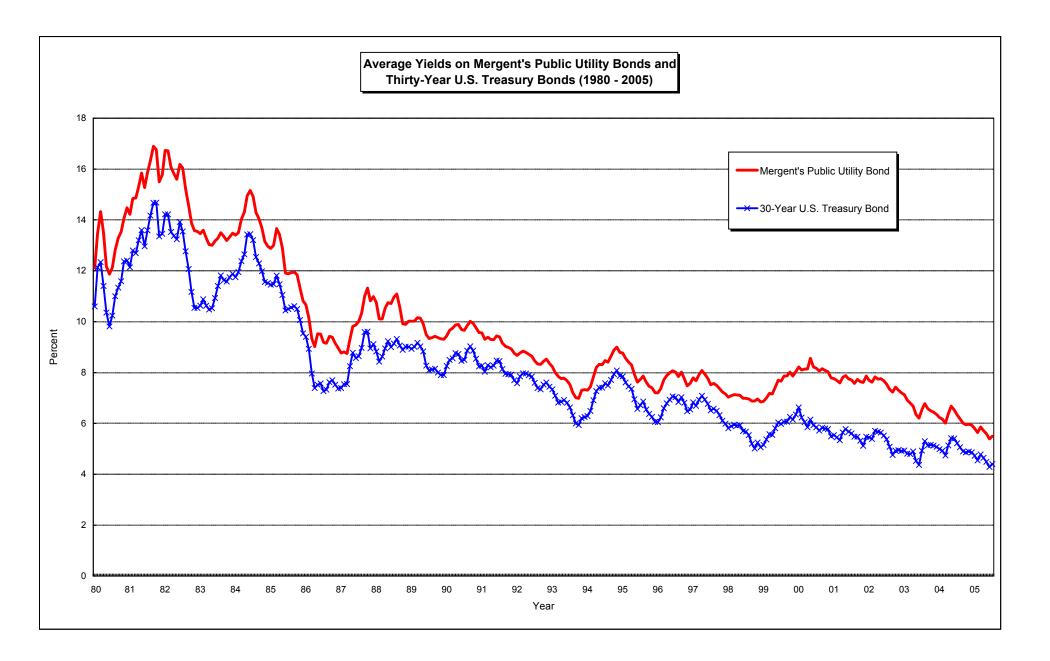
Mo/Year Jan 1980	Rate (%) 12.12	Mo/Year Jan 1984	Rate (%) 13.40	Mo/Year Jan 1988	Rate (%) 10.75	Mo/Year Jan 1992	Rate (%) 8.67	Mo/Year Jan 1996	Rate (%) 7.20	Mo/Year Jan 2000	Rate (%) 8.22	Mo/Year Jan 2004	Rate (%) 6.23
Feb	13.48	Feb	13.50	Feb	10.13	Feb	8.77	Feb	7.37	Feb	8.10	Feb	6.17
Mar	14.33	Mar	14.03	Mar	10.11	Mar	8.84	Mar	7.72	Mar	8.14	Mar	6.01
Apr	13.50	Apr	14.30	Apr	10.53	Apr	8.79	Apr	7.88	Apr	8.14	Apr	6.38
May	12.17	May	14.95	May	10.75	May	8.72	May	7.99	May	8.55	May	6.68
Jun	11.87	Jun	15.16	Jun	10.71	Jun	8.64	Jun	8.07	Jun	8.22	Jun	6.53
Jul	12.12	Jul	14.92	Jul	10.96	Jul	8.46	Jul	8.02	Jul	8.17	Jul	6.34
Aug	12.82	Aug	14.29	Aug	11.09	Aug	8.34	Aug	7.84	Aug	8.05	Aug	6.18
Sep	13.29	Sep	14.04	Sep	10.56	Sep	8.32	Sep	8.01	Sep	8.16	Sep	6.01
Oct	13.53	Oct	13.68	Oct	9.92	Oct	8.44	Oct	7.76	Oct	8.08	Oct	5.95
Nov	14.07	Nov	13.15	Nov	9.89	Nov	8.53	Nov	7.48	Nov	8.03	Nov	5.97
Dec	14.48	Dec	12.96	Dec	10.02	Dec	8.36	Dec	7.58	Dec	7.79	Dec	5.93
Jan 1981	14.22	Jan 1985	12.88	Jan 1989	10.02	Jan 1993	8.23	Jan 1997	7.79	Jan 2001	7.76	Jan 2005	5.80
Feb	14.84	Feb	13.00	Feb	10.02	Feb	8.00	Feb	7.68	Feb	7.69	Feb	5.64
Mar	14.86	Mar	13.66	Mar	10.16	Mar	7.85	Mar	7.92	Mar	7.59	Mar	5.86
Apr	15.32	Apr	13.42	Apr	10.14	Apr	7.76	Apr	8.08	Apr	7.81	Apr	5.72
May	15.84	May	12.89	May	9.92	May	7.78	May	7.94	May	7.88	May	5.60
Jun	15.27	Jun	11.91	Jun	9.49	Jun	7.68	Jun	7.77	Jun	7.75	Jun	5.39
Jul	15.87	Jul	11.88	Jul	9.34	Jul	7.53	Jul	7.52	Jul	7.71	Jul	5.50
Aug	16.33	Aug	11.93	Aug	9.37	Aug	7.21	Aug	7.57	Aug	7.57	Aug	5.51
Sep	16.89	Sep	11.95	Sep	9.43	Sep	7.01	Sep	7.50	Sep	7.73	0	
Oct	16.76	Oct	11.84	Oct	9.37	Oct	6.99	Oct	7.37	Oct	7.64		
Nov	15.50	Nov	11.33	Nov	9.33	Nov	7.30	Nov	7.24	Nov	7.61		
Dec	15.77	Dec	10.82	Dec	9.31	Dec	7.33	Dec	7.16	Dec	7.86		
Jan 1982	16.73	Jan 1986	10.66	Jan 1990	9.44	Jan 1994	7.31	Jan 1998	7.03	Jan 2002	7.69		
Feb	16.72	Feb	10.16	Feb	9.66	Feb	7.44	Feb	7.09	Feb	7.62		
Mar	16.07	Mar	9.33	Mar	9.75	Mar	7.83	Mar	7.13	Mar	7.83		
Apr	15.82	Apr	9.02	Apr	9.87	Apr	8.20	Apr	7.12	Apr	7.74		
May	15.60	May	9.52	May	9.89	May	8.32	May	7.11	May	7.76		
Jun	16.18	Jun	9.51	Jun	9.69	Jun	8.31	Jun	6.99	Jun	7.67		
Jul	16.04	Jul	9.19	Jul	9.66	Jul	8.47	Jul	6.99	Jul	7.54		
Aug	15.22	Aug	9.15	Aug	9.84	Aug	8.41	Aug	6.96	Aug	7.34		
Sep	14.56	Sep	9.42	Sep	10.01	Sep	8.65	Sep	6.88	Sep	7.23		
Oct	13.88	Oct	9.39	Oct	9.94	Oct	8.88	Oct	6.88	Oct	7.43		
Nov	13.58	Nov	9.15	Nov	9.76	Nov	9.00	Nov	6.96	Nov	7.31		
Dec	13.55	Dec	8.96	Dec	9.57	Dec	8.79	Dec	6.84	Dec	7.20		
Jan 1983	13.46	Jan 1987	8.77	Jan 1991	9.56	Jan 1995	8.77	Jan 1999	6.87	Jan 2003	7.13		
Feb	13.60	Feb	8.81	Feb	9.31	Feb	8.56	Feb	7.00	Feb	6.92		
Mar	13.28	Mar	8.75	Mar	9.39	Mar	8.41	Mar	7.18	Mar	6.80		
Apr	13.03	Apr	9.30	Apr	9.30	Apr	8.30	Apr	7.16	Apr	6.68		
May	13.00	May	9.82	May	9.29	May	7.93	May	7.42	May	6.35		
Jun	13.17	Jun	9.87	Jun	9.44	Jun	7.62	Jun	7.70	Jun	6.21		
Jul	13.28	Jul	10.01	Jul	9.40	Jul	7.73	Jul	7.66	Jul	6.54		
Aug	13.50	Aug	10.33	Aug	9.16	Aug	7.86	Aug	7.86	Aug	6.78		
Sep	13.35	Sep	11.00	Sep	9.03	Sep	7.62	Sep	7.87	Sep	6.58		
Oct	13.19	Oct	11.32	Oct	8.99	Oct	7.46	Oct	8.02	Oct	6.50		
Nov	13.33	Nov	10.82	Nov	8.93	Nov	7.40	Nov	7.86	Nov	6.44		
Dec	13.48	Dec	10.99	Dec	8.76	Dec	7.21	Dec	8.04	Dec	6.36		

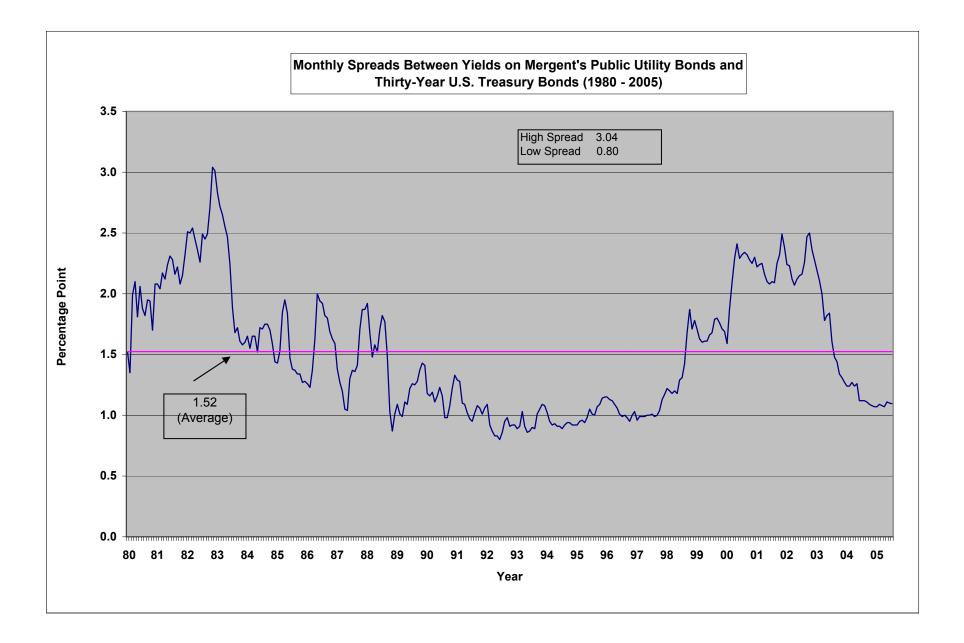
Source: Mergent Bond Record

# Average Yields on Thirty-Year U.S. Treasury Bonds

Mo/Year	Rate (%)												
Jan 1980	10.60	Jan 1984	11.75	Jan 1988	8.83	Jan 1992	7.58	Jan 1996	6.05	Jan 2000	6.63	Jan 2004	4.99
Feb	12.13	Feb	11.95	Feb	8.43	Feb	7.85	Feb	6.24	Feb	6.23	Feb	4.93
Mar	12.34	Mar	12.38	Mar	8.63	Mar	7.97	Mar	6.60	Mar	6.05	Mar	4.74
Apr	11.40	Apr	12.65	Apr	8.95	Apr	7.96	Apr	6.79	Apr	5.85	Apr	5.14
May	10.36	May	13.43	May	9.23	May	7.89	May	6.93	May	6.15	May	5.42
Jun	9.81	Jun	13.44	Jun	9.00	Jun	7.84	Jun	7.06	Jun	5.93	Jun	5.41
Jul	10.24	Jul	13.21	Jul	9.14	Jul	7.60	Jul	7.03	Jul	5.85	Jul	5.22
Aug	11.00	Aug	12.54	Aug	9.32	Aug	7.39	Aug	6.84	Aug	5.72	Aug	5.06
Sep	11.34	Sep	12.29	Sep	9.06	Sep	7.34	Sep	7.03	Sep	5.83	Sep	4.90
Oct	11.59	Oct	11.98	Oct	8.89	Oct	7.53	Oct	6.81	Oct	5.80	Oct	4.86
Nov	12.37	Nov	11.56	Nov	9.02	Nov	7.61	Nov	6.48	Nov	5.78	Nov	4.89
Dec	12.40	Dec	11.52	Dec	9.01	Dec	7.44	Dec	6.55	Dec	5.49	Dec	4.86
Jan 1981	12.14	Jan 1985	11.45	Jan 1989	8.93	Jan 1993	7.34	Jan 1997	6.83	Jan 2001	5.54	Jan 2005	4.73
Feb	12.80	Feb	11.47	Feb	9.01	Feb	7.09	Feb	6.69	Feb	5.45	Feb	4.55
Mar	12.69	Mar	11.81	Mar	9.17	Mar	6.82	Mar	6.93	Mar	5.34	Mar	4.78
Apr	13.20	Apr	11.47	Apr	9.03	Apr	6.85	Apr	7.09	Apr	5.65	Apr	4.65
May	13.60	May	11.05	May	8.83	May	6.92	May	6.94	May	5.78	May	4.49
Jun	12.96	Jun	10.44	Jun	8.27	Jun	6.81	Jun	6.77	Jun	5.67	Jun	4.29
Jul	13.59	Jul	10.50	Jul	8.08	Jul	6.63	Jul	6.51	Jul	5.61	Jul	4.41
Aug	14.17	Aug	10.56	Aug	8.12	Aug	6.32	Aug	6.58	Aug	5.48	Aug	4.46
Sep	14.67	Sep	10.61	Sep	8.15	Sep	6.00	Sep	6.50	Sep	5.48		
Oct	14.68	Oct	10.50	Oct	8.00	Oct	5.94	Oct	6.33	Oct	5.32		
Nov	13.35	Nov	10.06	Nov	7.90	Nov	6.21	Nov	6.11	Nov	5.12		
Dec	13.45	Dec	9.54	Dec	7.90	Dec	6.25	Dec	5.99	Dec	5.48		
Jan 1982	14.22	Jan 1986	9.40	Jan 1990	8.26	Jan 1994	6.29	Jan 1998	5.81	Jan 2002	5.44		
Feb	14.22	Feb	8.93	Feb	8.50	Feb	6.49	Feb	5.89	Feb	5.39		
Mar	13.53	Mar	7.96	Mar	8.56	Mar	6.91	Mar	5.95	Mar	5.71		
Apr	13.37	Apr	7.39	Apr	8.76	Apr	7.27	Apr	5.92	Apr	5.67		
May	13.24	May	7.52	May	8.73	May	7.41	May	5.93	May	5.64		
Jun	13.92	Jun	7.57	Jun	8.46	Jun	7.40	Jun	5.70	Jun	5.52		
Jul	13.55	Jul	7.27	Jul	8.50	Jul	7.58	Jul	5.68	Jul	5.38		
Aug	12.77	Aug	7.33	Aug	8.86	Aug	7.49	Aug	5.54	Aug	5.08		
Sep	12.07	Sep	7.62	Sep	9.03	Sep	7.71	Sep	5.20	Sep	4.76		
Oct	11.17	Oct	7.70	Oct	8.86	Oct	7.94	Oct	5.01	Oct	4.93		
Nov	10.54	Nov	7.52	Nov	8.54	Nov	8.08	Nov	5.25	Nov	4.95		
Dec	10.54	Dec	7.37	Dec	8.24	Dec	7.87	Dec	5.06	Dec	4.92		
Jan 1983	10.63	Jan 1987	7.39	Jan 1991	8.27	Jan 1995	7.85	Jan 1999	5.16	Jan 2003	4.94		
Feb	10.88	Feb	7.54	Feb	8.03	Feb	7.61	Feb	5.37	Feb	4.81		
Mar	10.63	Mar	7.55	Mar	8.29	Mar	7.45	Mar	5.58	Mar	4.80		
Apr	10.48	Apr	8.25	Apr	8.21	Apr	7.36	Apr	5.55	Apr	4.90		
May	10.53	May	8.78	May	8.27	May	6.95	May	5.81	May	4.53		
Jun	10.93	Jun	8.57	Jun	8.47	Jun	6.57	Jun	6.04	Jun	4.37		
Jul	11.40	Jul	8.64	Jul	8.45	Jul	6.72	Jul	5.98	Jul	4.93		
Aug	11.82	Aug	8.97	Aug	8.14	Aug	6.86	Aug	6.07	Aug	5.30		
Sep	11.63	Sep	9.59	Sep	7.95	Sep	6.55	Sep	6.07	Sep	5.14		
Oct	11.58	Oct	9.61	Oct	7.93	Oct	6.37	Oct	6.26	Oct	5.16		
Nov	11.75	Nov	8.95	Nov	7.92	Nov	6.26	Nov	6.15	Nov	5.13		
Dec	11.88	Dec	9.12	Dec	7.70	Dec	6.06	Dec	6.35	Dec	5.08		

Sources: Federal Reserve, http://www.stls.frb.org/fred/data/irates yahoo finance http://finance.yahoo.com/q/hp?s=^TYX





## Economic Estimates and Projections, 2005 - 2007

		Inflation Rate	e		Real GDP		1	Unemployme	nt	3-	Mo. T-Bill R	ate	30	-Yr. T-Bond F	Rate
Source	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
Value Line Investment Survey (08/26/05)	3.30%	2.40%	2.00%	3.70%	3.40%	3.10%	5.10%	5.00%	5.00%	3.20%	4.20%	4.30%	4.70%	5.30%	5.60%
The Budget and Economic Outlook FY2005-2015	2.40%	1.90%	2.10%	3.80%	3.70%	3.70%	5.20%	5.20%	5.20%	2.80%	4.00%	4.60%	N.A.	N.A.	N.A.
Current rate	3.60%			3.30%			4.90%			3.44%			4.42%		

#### Notes: N.A. = Not Available.

Sources of Current Rates:	Inflation:	The Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, 12-Month Period Ending August 31, 2005.
	30-Yr. T-Bond:	Investopedia, 30-Year U.S. Treasury Bond Rate, http://www.investopedia.com/offsite.asp?URL=http://quote.yahoo.com/q?s=%5ETYX&d=1y as of October 7, 2005.
	3-Month Treasury	: The Federal Reserve Bank of St. Louis, 3-Month Treasury Bill Rate, http://research.stlouisfed.org/fred2/data/GS3M.txt as of August 1, 2005.
	GDP:	U.S. Department of Commerce, Bureau of Economic Analysis, Real GDP for the 3-month period ending June 30, 2005.
	Unemployment:	The Bureau of Labor Statistics, Economy at a Glance - Unemployment Rate as of August 2005.

Other Sources: The Congressional Budget Office, The Budget and Economic Outlook: Fiscal Years 2005-2015 http://www.cbo.gov/showdoc.cfm?index=2727&sequence=11.

# Historical Consolidated Capital Structures for

Aquila, Inc.

(Dollars in millions)

Capital Structure	1992	1993	1994	1995	1996
Common Equity Preferred Stock Long-Term Debt Short-Term Debt	\$661.1 95.1 896.7 ** <u>230.9</u> \$1,883.8	\$851.7 83.9 1,011.5 ** <u>70.0</u> \$2,017.1	\$906.8 25.4 1,115.7 ** <u>182.4</u> \$2,230.3	\$946.3 125.4 1,370.5 ** <u>288.6</u> \$2,730.8	\$1,158.0 125.0 1,496.4 ** <u>252.0</u> \$3,031.4
Capital Structure	1997_	1998	1999	2000	2001
Common Equity Preferred Stock Long-Term Debt Short-Term Debt	\$1,163.6 100.0 * 1,508.9 ** <u>113.8</u> \$2,886.3	\$1,446.3 100.0 * 1,625.4 ** <u>235.6</u> \$3,407.3	\$1,525.4 350.0 * 2,245.1 ** <u>248.9</u> \$4,369.4	\$1,799.6 450.0 * 2,397.6 ** 501.0 \$5,148.2	\$2,551.6 250.0 * 2,427.0 ** 548.6 \$5,777.2
Capital Structure	2002_	2003	2004		
Common Equity Preferred Stock Long-Term Debt Short-Term Debt	\$1,608.0 0.0 * 2,929.0 ** <u>301.0</u> \$4,838.0	\$1,359.3 0.0 * 2,706.0 ** 0.0 \$4,065.3	\$1,130.5 0.0 * 2,371.9 ** 0.0 \$3,502.4		

Notes: \* Preferred Stock includes Company-obligated preferred securities. \*\*Includes current maturities on long-term debt.

Sources: Aquila, Inc.'s 2000, 2002 and 2004 Annual Reports.

# Historical Consolidated Capital Structures for

Aquila, Inc.

(In Percentages)

Capital Structure	1992	1993	1994	1995	1996
Common Equity	35.09%	42.22%	40.66%	34.65%	38.20%
Preferred Stock	5.05%	4.16%	1.14%	4.59%	4.12%
Long-Term Debt	47.60% **	50.15% **	50.02% **	50.19% **	49.36% **
Short-Term Debt	12.26%	3.47%	8.18%	10.57%	8.31%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Capital Structure	1997	1998	1999	2000	2001
Common Equity	40.31%	42.45%	34.91%	34.96%	44.17%
Preferred Stock	3.46% *	2.93% *	8.01% *	8.74% *	4.33% *
Long-Term Debt	52.28% **	47.70% **	51.38% **	46.57% **	42.01% **
Short-Term Debt	3.94%	6.91%	5.70%	9.73%	9.50%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
				10-Year	5-Year
				(1992-2001)	(1997-2001)
Capital Structure	2002	2003	2004	Average	Average
Common Equity	33.24%	33.44%	32.28%	38.76%	39.36%
Preferred Stock	0.00% *	0.00% *	0.00% *	4.65%	5.50%
Long-Term Debt	60.54% **	47.70% **	67.72% **	48.73%	47.99%
Short-Term Debt	6.22%	0.00%	0.00%	7.86%	7.16%
	100.00%	81.14%	100.00%	100.00%	100.00%

Source: Schedule 7-1

Notes: \* Preferred Stock includes Company-obligated preferred securities.

\*\*Includes current maturities on long-term debt.

Sources: Aquila, Inc.'s 2000, 2002 and 2004 Annual Reports.

#### Selected Financial Ratios for Aquila, Inc. Consolidated Basis

Financial Ratios	2000	2001	2002	2003	2004
Return on Ending Common Equity	13.46%	11.70%	-129.06% *	-24.75% *	-25.87% *
Earnings Per Common Share	\$1.91	\$2.01	-\$12.83	-\$1.73	-\$1.13
Cash Dividends Per Common Share	\$1.20	\$1.20	\$0.78	\$0.00	\$0.00
Common Dividend Payout Ratio	62.83%	59.70%	N.M.	N.M.	N.M.
Year-End Market Price Per Common Share	\$31.00	\$17.10	\$1.77	\$3.39	\$3.69
Year-End Book Value Per Common Share	\$17.94	\$22.01	\$8.30	\$6.96	\$4.68
Year-End Market-to- Book Ratio	1.73 x	0.78 x	0.21 x	0.49 x	0.79 x
Pre-Tax Interest Coverage Ratio	2.51 x	3.16 x	Negative x	Negative x	Negative x
Issuer Credit Rating	BBB **	BBB **	BB **	B **	B- **

\* Because the financial data was not directly provided in Aquila, Inc.'s 2002 or 2004 Annual Report, Staff made its own calculation of the Return on Ending Common Equity.

\*\*Ratings are as of year-end for respective years. Ratings for Aquila have changed many times during the period from 2002 to present.

#### Formulas:

Return on Ending Common Equity = Net Income Available for Common Stock / Ending Common Shareholders' Equity.

Year-End Market to Book Ratio = Year-End Market Price Per Common Share / Year-End Book Value Per Common Share.

Year-End Market Price Per Common Share has been adjusted for stock splits and stock dividends.

Pre-Tax Interest Coverage Ratio = (Net Income + Income Taxes + Total Interest Expense) / Total Interest Expense.

#### Sources:

Aquila, Inc.'s Stockholders Annual Reports. The Value Line Investment Survey: Ratings & Reports July 1, 2005. S&P's Stock Guides, January 2005 and January 2004. S&P's Ratings Direct at: http://www.ratingsdirect.com/Apps/RD

# Capital Structure as of June 30, 2005 for Aquila, Inc.

Capital Component	Amount in Dollars	Percentage of Capital
Common Stock Equity	\$1,103,700,000	36.16%
Preferred Stock	0	0.00%
Long-Term Debt	1,948,769,382 *	63.84%
Short-Term Debt	0	0.00%
Total Capitalization	\$3,052,469,382	100.00%

# Electric Financial Ratio Benchmark Total Debt / Total Capital

Standard & Poor's Corporation's RatingsDirect, Revised Financial Guidelines as of June 2, 2004 BBB Credit Rating based on a "6" Business Profile

48% to 58%

Note: \*Net proceeds as indicated on Schedule 10.

Source: Aquila, Inc.'s response to Staff's Data Request No. MPSC-250 and Aquila's 10Q for June 30, 2005.

#### Aquila, Inc. Weighted Average Cost of Debt as of June 30, 2005

LONG-TERM DEBT	ISSUE DATE YR/MO/DAY	DUE DATE YR/MO/DAY	INTEREST RATE	<u>A</u> ORIGINAL ISSUE	<u>B</u> AMOUNT OUTSTANDING	<u>C</u> DISCOUNT/PREMIUM & ISSUE COSTS	<u>D=B/A*C</u> RELATIVE COSTS	<u>B-D</u> NET PROCEEDS	ANNUAL INTEREST	COST OF MONEY
Convertible Subordinated Debentures	July 24, 1986	July 1, 2011	6.625%	50,000,000	2,173,001	2,626,347	114,141	2,058,860	143,961	6.992%
Wamego, KS Pollution Control Bonds	March 1, 1996	March 1, 2026	2.000%	7,300,000	7,300,000	422,982	422,982	6,877,018	146,000	2.123%
Senior Notes, 9.0% Series	November 25, 1991	November 15, 2021	9.000%	150,000,000	5,000,000	3,018,294	100,610	4,899,390	450,000	9.185%
Senior Notes, 8.2% Series	January 29, 1992	January 15, 2007	8.200%	130,000,000	36,905,000	13,042,943	3,702,691	33,202,309	3,026,210	9.114%
Senior Notes, 8.0% Series	March 3, 1993	March 1, 2023	8.000%	125,000,000	51,500,000	1,982,502	816,791	50,683,209	4,120,000	8.129%
Environmental Improvement Bonds	May 26, 1993	May 1, 2028	2.030%	5,000,000	5,000,000	111,563	111,563	4,888,437	101,500	2.076%
Sanwa Bus CC	December 9, 1995	December 9, 2009	6.990%	8,190,000	3,533,280	35,000	15,099	3,518,181	246,976	7.020%
Senior Notes, 6.7% Series	October 17, 1996	October 15, 2006	6.700%	100,000,000	85,900,000	666,537	572,555	85,327,445	5,755,300	6.745%
Senior Notes, 8.27% Series	March 31, 1999	November 15, 2021	8.270%	131,750,000	80,850,000	3,591,143	2,203,749	78,646,251	6,686,295	8.502%
Senior Notes, 9.03% Series	March 31, 1999	December 1, 2005	9.030%	20,232,000	19,057,000	613,622	577,985	18,479,015	1,720,847	9.312%
Senior Notes, 7.625% Series	November 15, 1999	November 15, 2009	7.625%	200,000,000	199,000,000	3,025,739	3,010,610	195,989,390	15,173,750	7.742%
SJLP FMB	November 25, 1991	February 1, 2021	9.440%	22,500,000	18,000,000	664,653	531,722	17,468,278	1,699,200	9.727%
SJLP Unsecured MTN	December 6, 1993	December 1, 2023	7.170%	7,000,000	7,000,000	382,259	382,259	6,617,741	501,900	7.584%
SJLP Unsecured MTN	November 30, 1993	November 30, 2023	7.330%	3,000,000	3,000,000	163,606	163,606	2,836,394	219,900	7.753%
SJLP Unsecured MTN	November 30, 1993	November 29, 2013	7.160%	9,000,000	9,000,000	490,738	490,738	8,509,262	644,400	7.573%
SJLP Unsecured MTN	November 30, 1993	November 29, 2013		1,000,000	1,000,000	54,526	54,526	945,474	71,300	7.541%
SJLP Unsecured Pollution Control Bonds	June 4, 1995	February 1, 2013	5.850%	5,600,000	5,600,000	913,838	913,838	4,686,162	327,600	6.991%
Senior Notes, 7.95% Series (downgrade 9.95%)	February 1, 2001	February 1, 2011	7.950%	250,000,000	250,000,000	1,880,959	1,880,959	248,119,041	19,875,000	8.010%
Senior Notes, 11.875% Series (downgrade 14.875%)	July 3, 2002	July 1, 2012	6.700%	500,000,000	500,000,000	9,365,205	9,365,205	490,634,795	33,500,000	6.828%
QUIBS	February 28, 2002	March 1, 2032		287,500,000	287,500,000	9,432,634	9,432,634	278,067,366	22,640,625	8.142%
Manditorily Convertible Senior Notes (PIES) (A)	August 24, 2004	September 15, 2007		345,000,000	3,926,375	10,699,751	121,772	3,804,603	265,030	6.966%
Term Loan	September 20, 2004	September 19, 2009	4.010%	220,000,000	220,000,000	5,839,825	5,839,825	214,160,175	8,822,000	4.119%
Everest Term Loan	April 28, 2004	April 1, 2007	5.25%	5,500,000	5,500,000	53,925	53,925	5,446,075	288,750	
MZ Partners	December 1, 2004	January 2, 2010	4.75%	2,715,000	1,531,121	34,847	19,652	1,511,469	72,728	4.812%
MZ Partners Nebraska	June 9, 1994	July 1, 2009	7.88%	3,640,000	1,516,805	63,865	26,613	1,490,192	119,448	8.016%
UCFC 7.75% Senior Notes	June 20, 2001	June 15, 2011	7.750%	200,000,000	197,000,000	17,357,512	17,097,149	179,902,851	15,267,500	8.487%
Total Aquila Long-Term Debt			_	2,789,927,000	2,006,792,582			1,948,769,382	141,886,222	7.281%

Source: Response to Staff's Data Information Request No. MPSC 250.

Notes:

July 3, 2002 11.875% senior note adjusted downward to more closely match the cost of a senior note that Empire issued during the same year. September 20, 2004 Term Loan adjusted downward to reflect the margin that would be charged if Aquila were investment grade.

# Criteria for Selecting Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	(6)
					Two	
					Sources for	Comparable
	Stock	Information	10-Years	At Least Investment	Projected Growth	Company
Vertically Integrated	Publicly	Printed In	of Data	Grade Credit	Available with One	Met All
Electric Utility Companies(Ticker)	Traded	Value Line	Available	Rating	from Value Line	Criteria
Cen. Vermont Pub. Serv.(CV)	Yes	Yes	Yes	Yes	No	
El Paso Electric(EE)	Yes	Yes	No			
Empire Dist. Electric(EDE)	Yes	Yes	Yes	Yes	Yes	Yes
Green Mountain Power(GMP)	Yes	Yes	Yes	Yes	No	
Hawaiian Electric(HE)	Yes	Yes	Yes	Yes	Yes	Yes
IDACORP, Inc.(IDA)	Yes	Yes	Yes	Yes	Yes	Yes
PacifiCorp(N.A.)	No					
Pinnacle West Capital(PNW)	Yes	Yes	Yes	Yes	Yes	Yes
Portland General Electric Co.(N.A.)	No					
Puget Energy Inc.(PSD)	Yes	Yes	Yes	Yes	Yes	Yes
Southern Co.(SO)	Yes	Yes	Yes	Yes	Yes	Yes

Sources: Columns 1 and 4 = Standard & Poor's RatingsDirect

Columns 2, 3 and 5 = The Value Line Investment Survey: Ratings & Reports. Columnn 5 = August 2005 Earnings Guide and I/B/E/S Inc.'s Institutional Brokers Estimate System, August 18, 2005.

Notes: N.A. = Not available because not publicly traded.

# Comparable Electric Utility Companies For Aquila, Inc. d/b/a Aquila Networks MPS And Aquila Networks L&P

	Ticker	
Number	Symbol	Company Name
1	EDE	Empire District Electric Company
2	HE	Hawaiian Electric Industries, Inc.
3	IDA	IDACORP, Inc.
4	PNW	Pinnacle West Capital
5	PSD	Puget Energy Inc.
6	SO	Southern Co.

## Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for the Six Comparable Electric Utility Companies

		10-Year Annual Compound Growth Rates		
				Average of 10 Year Annual Compound
Company Name	DPS	EPS	BVPS	Growth Rates
Empire District Electric Company	0.00%	-1.00%	2.00%	0.33%
Hawaiian Electric Industries, Inc.	1.00%	2.00%	2.50%	1.83%
IDACORP, Inc.	-1.50%	-1.50%	2.50%	-0.17%
Pinnacle West Capital	17.50%	3.00%	5.00%	8.50%
Puget Energy Inc.	-5.00%	-4.00%	-1.00%	-3.33%
Southern Co.	2.00%	<u>2.50%</u>	<u>1.00%</u>	1.83%
Average	<u>2.33%</u>	<u>0.17%</u>	<u>2.00%</u>	<u>1.50%</u>
Standard Deviation	7.14%	2.53%	1.80%	3.58%

Source: The Value Line Investment Survey: Ratings & Reports, June 3, July 1 and August 12, 2005.

## Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for the Six Comparable Electric Utility Companies

		5-Year Annual Compound Growth Rates			
					Average of 10 Year
					Annual
					Compound
Company Name	DPS	EPS	_	BVPS	Growth Rates
Empire District Electric Company	0.00%	-3.50%		2.00%	-0.50%
Hawaiian Electric Industries, Inc.	0.00%	1.00%		2.50%	1.17%
IDACORP, Inc.	-3.00%	-9.00%		3.50%	-2.83%
Pinnacle West Capital	7.00%	-3.00%		4.00%	2.67%
Puget Energy Inc.	-10.50%	-5.50%		0.50%	-5.17%
Southern Co.	<u>1.00%</u>	<u>2.50%</u>		<u>-1.50%</u>	<u>0.67%</u>
Average	<u>-0.92%</u>	<u>-2.92%</u>		<u>1.83%</u>	<u>-0.67%</u>
Standard Deviation	5.23%	3.85%		1.86%	2.62%

Source: The Value Line Investment Survey: Ratings & Reports, June 3, July 1, and August 12, 2005.

# Average of Ten- and Five-Year Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for the Comparable Electric Utility Companies

	10-Year	5-Year	Average of
	Average	Average	5-Year &
	DPS, EPS &	DPS, EPS &	10-Year
Company Name	BVPS	BVPS	Averages
Empire District Electric Company	0.33%	-0.50%	-0.08%
Hawaiian Electric Industries, Inc.	1.83%	1.17%	1.50%
IDACORP, Inc.	-0.17%	-2.83%	-1.50%
Pinnacle West Capital	8.50%	2.67%	5.58%
Puget Energy Inc.	-3.33%	-5.17%	-4.25%
Southern Co.	1.83%	0.67%	1.25%
Average	1.50%	-0.67%	0.42%

## Historical and Projected Growth Rates for the Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	(6)
		Projected				
	Historical	5 Year	Projected	Projected		Average of
	Growth Rate	Growth	5-Year	3-5 Year	Average	Historical
	(DPS, EPS and	IBES	EPS Growth	EPS Growth	Projected	& Projected
Company Name	BVPS)	(Mean)	S&P	Value Line	Growth	Growth
Empire District Electric Company	-0.08%	2.00%	2.00%	8.00%	4.00%	1.96%
Hawaiian Electric Industries, Inc.	1.50%	3.10%	3.00%	2.50%	2.87%	2.18%
IDACORP, Inc.	-1.50%	4.00%	4.00%	6.00%	4.67%	1.58%
Pinnacle West Capital	5.58%	4.50%	5.00%	3.50%	4.33%	4.96%
Puget Energy Inc.	-4.25%	4.00%	4.00%	5.50%	4.50%	0.13%
Southern Co.	1.25%	4.80%	5.00%	4.00%	4.60%	2.93%
Average	0.42%	3.73%	3.83%	4.92%	4.16%	2.29%

## Proposed Range of Growth: 3.9%-4.9%

Column 5 = [ (Column 2 + Column 3 + Column 4) / 3 ]

Column 6 = [(Column 1 + Column 5) / 2]

Sources: Column 1 = Average of 10-Year and 5-Year Annual Compound Growth Rates from Schedule 13-3.

Column 2 = I/B/E/S Inc.'s Institutional Brokers Estimate System, August 18, 2005.

Column 3 = Standard & Poor's Earnings Guide, August 2005.

Column 4 = The Value Line Investment Survey: Ratings and Reports, June 3, July 1 and August 12, 2005.

# Average High / Low Stock Price for May 2005 through August 2005 for the Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	May	2005	June	2005	July	2005	Augus	st 2005	Average High/Low
	High	Low	High	Low	High	Low	High	Low	Stock
	Stock	Price							
Company Name	Price	(5/05 - 8/05)							
Empire District Electric Company	23.390	22.000	24.450	22.970	25.010	23.570	24.410	22.300	23.513
Hawaiian Electric Industries, Inc.	26.030	24.690	27.450	25.790	27.770	26.510	27.810	26.210	26.533
IDACORP, Inc.	28.510	26.220	30.800	28.330	32.050	30.490	31.560	28.750	29.589
Pinnacle West Capital	44.340	41.310	45.340	43.820	46.160	43.760	46.680	43.220	44.329
Puget Energy Inc.	22.760	21.350	23.560	22.600	24.360	23.260	23.540	22.050	22.935
Southern Co.	34.700	32.700	35.000	33.830	35.930	34.300	35.310	33.240	34.376

Notes:

Column 9 = [(Column 1 + Column 2 + Column 3 + Column 4 + Column 5 + Column 6 + Column 7 + Column 8) / 8].

Sources: S & P Stock Guides: June 2005, July 2005, August 2005 and September 2005.

## DCF Estimated Costs of Common Equity for the Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	
	Expected Annual	Average High/Low Stock	Projected Dividend	Average of Historical & Projected	Estimated Cost of Common	
Company Name	Dividend	Price	Yield	Growth	Equity	
Empire District Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. Pinnacle West Capital Puget Energy Inc. Southern Co. Average	\$1.28 \$1.24 \$1.20 \$1.98 \$1.00 \$1.51	\$23.513 \$26.533 \$29.589 \$44.329 \$22.935 \$34.376	5.44% 4.67% 4.06% 4.47% 4.36% 4.38% 4.56%	1.96% 2.18% 1.58% 4.96% 0.13% 2.93% 2.29%	7.40% 6.86% 5.64% 9.42% 4.49% 7.30% 6.85%	
		Proposed Dividend Yield: Proposed Range of Growth:				
		Estimated Co	quity:	8.50%-9.50%		

Notes: Column 1 = Estimated Dividends Declared per share represents the average projected dividends for 2005 and 2006.

Column 3 = ( Column 1 / Column 2 ).

Column 5 = ( Column 3 +Column 4 ).

Sources: Column 1 = The Value Line Investment Survey: Ratings and Reports, June 3, July 1, and August 12, 2005.

Column 2 = Schedule 15.

Column 4 = Schedule 14.

## Capital Asset Pricing Model (CAPM) Costs of Common Equity Estimates for the Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	(6)
					CAPM	CAPM
			Market	Market	Cost of	Cost of
	Risk	Company's	Risk	Risk	Common	Common
	Free	Value Line	Premium	Premium	Equity	Equity
Company Name	Rate	Beta	(1926-2004)	(1995-2004)	(1926-2002)	(1995-2004)
Empire District Electric Company	4.46%	0.70	6.60%	2.29%	9.08%	6.06%
Hawaiian Electric Industries, Inc.	4.46%	0.65	6.60%	2.29%	8.75%	5.95%
IDACORP, Inc.	4.46%	0.90	6.60%	2.29%	10.40%	6.52%
Pinnacle West Capital	4.46%	0.85	6.60%	2.29%	10.07%	6.41%
Puget Energy Inc.	4.46%	0.75	6.60%	2.29%	9.41%	6.18%
Southern Co.	4.46%	0.65	6.60%	2.29%	8.75%	5.95%
Average		0.75			9.41%	6.18%

Sources:

- Column 1 = The appropriate yield is equal to the average 30-year U.S. Treasury Bond yield for August 2005 which was obtained from Investopedia at: http://www.investopedia.com
- Column 2 = Beta is a measure of the movement and relative risk of an individual stock to the market as a whole as reported by the Value Line Investment Survey: Ratings & Reports, June 3, July 1, and August 12, 2005.
- Column 3 = The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk free investment. The appropriate Market Risk Premium for the period 1926 2004 was determined to be 6.60% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2005 Yearbook.
- Column 4 = The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk free investment. The appropriate Market Risk Premium for the period 1995 2004 was determined to be 2.29% as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2005 Yearbook.

Column 5 = (Column 1 + (Column 2 \* Column 3)).

Column 6 = (Column 1 + (Column 2 \* Column 4)).

## Capital Asset Pricing Model (CAPM) Costs of Common Equity Estimates for the Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	(6)
					CAPM	
			Ibbotson &		Cost of	CAPM
			Chen	Damodaran	Common	Cost of
	Risk	Company's	Ex-Post	Ex-Post	Equity	Common
	Free	Value Line	Risk	Risk	(Ibbotson	Equity
Company Name	Rate	Beta	Premium	Premium	& Chen)	(Damodaran)
Empire District Electric Company	4.46%	0.70	3.99%	2.47%	7.25%	6.19%
Hawaiian Electric Industries, Inc.	4.46%	0.65	3.99%	2.47%	7.05%	6.07%
IDACORP, Inc.	4.46%	0.90	3.99%	2.47%	8.05%	6.68%
Pinnacle West Capital	4.46%	0.85	3.99%	2.47%	7.85%	6.56%
Puget Energy Inc.	4.46%	0.75	3.99%	2.47%	7.45%	6.31%
Southern Co.	4.46%	0.65	3.99%	2.47%	7.05%	6.07%
Average		0.75			7.45%	6.31%

Sources:

- Column 1 = The appropriate yield is equal to the average 30-year U.S. Treasury Bond yield for August 2005 which was obtained from Investopedia at: http://www.investopedia.com
- Column 2 = Beta is a measure of the movement and relative risk of an individual stock to the market as a whole as reported by the Value Line Investment Survey: Ratings & Reports, June 3, July 1 and August 12, 2005.
- Column 3 = The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected holding period return from holding long-term treasury bonds. The appropriate Market Risk Premium of 3.99% is based on Roger G. Ibbotson and Peng Chen's expected return from investing in the stock market of 9.52% over the long run, which was indicated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2005 Yearbook and the expected average yield of 5.53% on long-term treasury bond's through 2009 provided by Value Line.
- Column 4 = The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk free investment. The appropriate Market Risk Premium of 2.26% is based on Dr. Aswath Damadoran's implied equity risk premium model provided on New York University's Leanard N. Stern School of Business' website. Inputs: 1.80% dividend yield (September 2005 Standard & Poor's Stock Guide), 10.58% S&P 500 earnings growth rate (http://finance.yahoo.com) and 4.46% growth in earnings over the long-run.

Column 5 = (Column 1 + (Column 2 \* Column 3)).

Column 6 = (Column 1 + (Column 2 \* Column 4)).

# Selected Financial Ratios for the Comparable Electric Utility Companies

	(1)	(2)	(3)	(4)	(5)	(6)
	June 30, 2005				2005	
	Common Equity	June 30, 2005	Pre-Tax	Market-	Projected	
	to	Long-Term	Interest	Market-	Return on	
	Total Capital	Debt	Coverage	to-Book	Common	Bond
Company Name	Ratio	Ratio	Ratio	Value	Equity	Rating
Empire District Electric Company	47.07%	44.52%	2.00 x *	1.56 x	8.50%	BBB
Hawaiian Electric Industries, Inc.	52.91%	39.04%	3.90 x *	1.75 x	10.00%	BBB+
IDACORP, Inc.	49.87%	47.73%	1.90 x *	1.22 x	7.50%	BBB+
Pinnacle West Capital	48.04%	50.58%	4.20 x *	1.32 x	8.50%	BBB
Puget Energy Inc.	39.47%	56.69%	2.20 x *	1.35 x	8.50%	BBB-
Southern Co.	40.72%	53.49%	4.50 x *	2.37 x	14.50%	Α
Average	46.35%	48.68%	<b>3.12</b> x	<b>1.60</b> x	9.58%	BBB+

Sources: SEC 10Qs for columns (1) and (2)

The Value Line Investment Survey: Ratings and Reports, June 3, July 1, and August 12, 2005 for columns (3) and (5). C.A. Turner Utility Reports, September 2005 for column (4). Standard & Poor's RatingsDirect for column (6).

Notes: \* As of March 31, 2005.

# **Public Utility Revenue Requirement**

## or

# **Cost of Service**

The formula for the revenue requirement of a public utility may be stated as follows :

Equation 1 :	Revenue Requirement = Cost of Service		
	or		
Equation 2 :	R R = O + ( V - D ) R		

The symbols in the second equation are represented by the following factors :

(

RR	= Revenue Requirement
0	= Prudent Operating Costs, including Depreciation and Taxes
V	= Gross Valuation of the Property Serving the Public
D	= Accumulated Depreciation
(V-D)	= Rate Base (Net Valuation)
V - D ) R	= Return Amount (\$\$) or Earnings Allowed on Rate Base
R	= iL+dP+kE or Overall Rate of Return (%)
i	= Embedded Cost of Debt
L	= Proportion of Debt in the Capital Structure
d	= Embedded Cost of Preferred Stock
Р	= Proportion of Preferred Stock in the Capital Structure
k	= Required Return on Common Equity (ROE)
E	= Proportion of Common Equity in the Capital Structure

# Weighted Cost of Capital as of June 30, 2005 For Aquila, Inc. d/b/a Aquila Networks MPS And Aquila Networks L&P

			Common Equity Return of:		
Capital Component	Percentage of Capital	Embedded Cost	8.50%	9.00%	9.50%
Common Stock Equity	36.16%		3.07%	3.25%	3.43%
Long-Term Debt	63.84%	7.281%	4.65%	4.65%	4.65%
Short-Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%
	100.00%		7.72%	7.90%	8.08%

Weighted Cost of Capital Using

Notes:

See Schedule 9 for the Capital Structure Ratios.

See Schedule 10 for the Embedded Cost of Long-Term Debt.

# SCHEDULE 21 IS DEEMED HIGHLY CONFIDENTIAL IN ITS ENTIRETY