



Schedule LWL - MIEC 4-21

Data Request No.: MIEC 4-21

RESPONSE

Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2

Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate Btu/kWh
1	Number of Units			586				
2	Maximum		818.10		1989	2008	92.00	15,500
3	Minimum		0.30		1900	1960	9.00	9,562
4	Median		12.25		1947	1985	44.00	12,359
5	Average		33.12				44.13	12,323
6	Standard Deviation		63.32				14.37	654
7	95% Confidence Limit							
8	Maximum		157.22				72.31	13,604
9	Minimum		(90.98)				15.96	11,042
10	Gorgas 2 & 3	AL	69.00	5	1944	1989	45	11,919
11	Gorgas 2 & 3	AL	69.00	4	1929	1977	48	12,104
12	U S Alliance Coosa Pines	AL	5.00	AOW3	1942	2003	61	12,451
13	Arapahoe	CO	44.00	2	1951	2002	51	11,700
14	Arapahoe	CO	44.00	1	1950	2002	52	11,730
15	Bayside Power Station	FL	187.50	4	1963	2003	40	12,576
16	Bayside Power Station	FL	179.50	3	1960	2003	43	11,741
17	Bayside Power Station	FL	125.00	2	1958	2003	45	10,760
18	Bayside Power Station	FL	125.00	1	1957	2003	46	12,196
19	Jefferson Smurfit Corp (FL)	FL	9.30	GEN4	1963	2003	40	12,156
20	Arkwright	GA	49.00	4	1948	2002	54	11,938
21	Arkwright	GA	40.20	3	1943	2002	59	12,399
22	Arkwright	GA	46.00	ST2	1942	2002	60	10,681
23	Arkwright	GA	46.00	ST1	1941	2002	61	10,738
24	Durango Georgia Paper Co	GA	18.70	NO3	1955	2006	51	12,177
25	Durango Georgia Paper Co	GA	6.70	NO2	1947	2006	59	12,371
26	Durango Georgia Paper Co	GA	4.00	NO1	1941	2006	65	12,472
27	International Paper Co Savannah	GA	20.00	GEN7	1957	2001	44	12,142
28	International Paper Co Savannah	GA	10.00	GEN6	1952	2001	49	12,283
29	International Paper Co Savannah	GA	7.50	GEN3	1940	2001	61	12,451
30	Mitchell (GA)	GA	27.50	1	1948	2002	54	14,519
31	Mitchell (GA)	GA	27.50	2	1948	2002	54	14,446
32	Pepeekeo	HI	23.80	GEN1	1974	2004	30	11,899
33	Ames Electric Services Power Plant (Ia Ames)	IA	12.60	ST4	1958	1986	28	12,193
34	Ames Electric Services Power Plant (Ia Ames)	IA	7.50	ST3	1950	1984	34	12,333
35	Boone (IA)	IA	3.50	3	1947	1977	30	12,401
36	Boone (IA)	IA	3.50	4	1923	1977	54	12,691
37	Bridgeport (IA)	IA	25.00	3	1957	1981	24	12,107
38	Bridgeport (IA)	IA	23.00	1	1953	1981	28	12,173
39	Bridgeport (IA)	IA	23.00	2	1953	1981	28	12,173
40	Carroll (IA)	IA	5.30	1	1952	1980	28	12,325
41	Carroll (IA)	IA	5.30	2	1953	1990	37	12,313
42	Denison (IA)	IA	3.00	4	1950	1986	36	12,368
43	Des Moines (IA MWPWR)	IA	113.64	7	1964	1994	30	11,314
44	Des Moines (IA MWPWR)	IA	75.00	6	1954	1993	39	11,746
45	Des Moines (IA MWPWR)	IA	5.00	3	1949	1990	41	12,365
46	Des Moines (IA MWPWR)	IA	30.00	2	1926	1990	64	12,451
47	Des Moines (IA MWPWR)	IA	20.00	1	1925	1990	65	12,542
48	Eagle Grove	IA	8.00	1	1949	1980	31	12,341
49	Hawkeye	IA	11.50	2	1954	1981	27	12,251
50	Hawkeye	IA	8.00	1	1949	1981	32	12,333
51	Humboldt	IA	20.30	4	1953	1999	46	12,183

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Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2

Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate
								Btu/kWh
52	Humboldt	IA	13.50	3	1951	1999	48	12,262
53	Humboldt	IA	9.40	1	1950	1999	49	12,315
54	Humboldt	IA	9.40	2	1950	1999	49	12,315
55	Iowa State Univ	IA	3.00	1	1949	2004	55	12,376
56	Lansing	IA	15.00	1	1948	2004	56	12,298
57	Maynard Station	IA	54.40	7	1958	1988	30	11,858
58	Muscatine	IA	12.50	6	1949	1985	36	12,305
59	Muscatine	IA	7.50	5	1944	1985	41	12,407
60	Pella	IA	4.00	4	1952	1992	40	12,329
61	Pella	IA	1.50	3	1948	1990	42	12,405
62	Prairie Creek 1 4	IA	23.00	1	1950	1996	46	12,206
63	Riverside (IA)	IA	46.00	ST4	1949	1988	39	12,034
64	Riverside (IA)	IA	2.50	ST2	1937	1983	46	12,524
65	Riverside (IA)	IA	20.00	ST3	1937	1983	46	12,385
66	Sibley One	IA	2.50	1	1948	1984	36	12,397
67	Sixth Street (IA)	IA	7.50	5	1917	1981	64	12,740
68	Streeter	IA	5.00	5	1954	1984	30	12,303
69	Streeter	IA	5.00	4	1949	1984	35	12,365
70	Webster City	IA	8.00	5	1960	1979	19	12,205
71	Webster City	IA	4.00	4	1950	1979	29	12,360
72	Webster City	IA	2.00	3	1939	1979	40	12,512
73	Webster City	IA	1.00	2	1928	1979	51	12,656
74	Webster City	IA	1.00	1	1921	1979	58	12,742
75	Carlyle	IL	3.00	3	1949	1985	36	12,381
76	Dixon	IL	69.00	5	1953	1978	25	11,800
77	Dixon	IL	50.00	4	1945	1978	33	12,049
78	Fairfield (IL)	IL	4.00	3	1948	1975	27	12,385
79	Fairfield (IL)	IL	2.50	2	1942	1975	33	12,471
80	Fairfield (IL)	IL	1.80	1	1939	1975	36	12,514
81	Fisk Street	IL	25.00	11	1949	1977	28	12,206
82	Fisk Street	IL	173.00	18	1949	1977	28	11,033
83	Joliet 9	IL	107.00	5	1950	1978	28	11,544
84	Lakeside	IL	20.00	5	1953	1982	29	12,196
85	Lakeside	IL	20.00	4	1949	1982	33	12,246
86	Mascoutah	IL	1.50	2	1967	1976	9	12,170
87	Mascoutah	IL	2.00	1	1965	1976	11	12,191
88	Moline	IL	12.00	ST3	1950	1976	26	12,297
89	Mt Carmel	IL	7.50	3	1952	1983	31	12,308
90	Mt Carmel	IL	2.00	1	1941	1990	49	12,487
91	Peru (IL)	IL	2.50	2	1938	1975	37	12,520
92	Peru (IL)	IL	1.00	ST1	1936	1975	39	12,557
93	Powerton	IL	105.00	4	1940	1974	34	11,683
94	Powerton	IL	105.00	3	1930	1974	44	11,807
95	Powerton	IL	55.00	2	1929	1974	45	12,215
96	Powerton	IL	55.00	1	1928	1974	46	12,228
97	R S Wallace	IL	113.60	7	1958	1985	27	11,389
98	R S Wallace	IL	85.90	6	1952	1985	33	11,680
99	R S Wallace	IL	40.20	5	1949	1985	36	12,084
100	R S Wallace	IL	40.30	4	1941	1985	44	12,180
101	R S Wallace	IL	25.00	3	1939	1985	46	12,330
102	Waukegan	IL	130.00	5	1931	1978	47	11,596
103	Waukegan	IL	121.00	6	1952	2007	55	12,670
104	4 AC Station	IN	67.50	14TG	1963	1999	36	11,689

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Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2
Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate Btu/kWh
105	4 AC Station	IN	67.50	15TG	1963	1999	36	11,687
106	Breed	IN	495.55	1	1960	1994	34	10,000
107	Crawfordsville	IN	4.50	3	1947	1976	29	12,394
108	Crawfordsville	IN	5.00	1	1939	1970	31	12,488
109	Crawfordsville	IN	3.50	2	1928	1960	32	12,636
110	Dresser Station	IN	50.00	6	1945	1975	30	12,057
111	Dresser Station	IN	50.00	5	1944	1975	31	12,070
112	Dresser Station	IN	50.00	4	1941	1975	34	12,107
113	F B Culley	IN	46.00	1	1955	2006	51	12,229
114	Frankfort	IN	17.00	3	1962	1977	15	12,109
115	Frankfort	IN	10.00	2	1952	1977	25	12,288
116	Frankfort	IN	6.00	1	1941	1977	36	12,456
117	Jasper 1	IN	5.00	4	1949	1975	28	12,365
118	Jasper 1	IN	2.00	1	1938	1975	37	12,524
119	Johnson Street	IN	15.00	4	1948	1970	22	12,298
120	Johnson Street	IN	15.00	1	1934	1970	36	12,471
121	Johnson Street	IN	15.00	2	1934	1970	36	12,471
122	Johnson Street	IN	15.00	3	1934	1970	36	12,471
123	Lawton Park	IN	15.00	3	1941	1975	34	12,384
124	Lawton Park	IN	15.00	2	1934	1975	41	12,471
125	Michigan City	IN	4.00	11	1930	1980	50	12,607
126	Perry K	IN	12.50	5	1938	1984	46	12,433
127	Perry K	IN	5.00	HS	1938	2000	62	12,494
128	Perry K	IN	15.00	3	1924	1989	65	12,593
129	Perry W	IN	11.63	7	1980	1997	17	11,929
130	Peru (IN)	IN	5.00	1	1933	1977	44	12,557
131	Smurfit Wabash	IN	2.00	7240	1947	2001	54	12,413
132	Smurfit Wabash	IN	2.00	8323	1947	2001	54	12,413
133	State Line Energy	IN	150.00	ST2	1938	1979	41	11,351
134	State Line Energy	IN	200.00	ST1	1929	1978	49	11,066
135	Twin Branch	IN	77.00	3	1940	1974	34	11,905
136	Twin Branch	IN	40.00	1	1925	1974	49	12,384
137	Twin Branch	IN	40.00	2	1925	1974	49	12,384
138	Wahington (IN)	IN	5.00	2	1957	1977	20	12,266
139	Wahington (IN)	IN	5.00	4	1957	1977	20	12,266
140	Wahington (IN)	IN	5.00	1	1947	1977	30	12,389
141	Wahington (IN)	IN	3.00	3	1938	1977	39	12,517
142	Lawrence Energy Center (KS)	KS	38.00	2	1952	2000	48	12,055
143	Lawrence Energy Center (KS)	KS	10.00	ST1	1939	1993	54	12,449
144	Cane Run	KY	112.50	2	1956	1985	29	11,426
145	Cane Run	KY	112.50	1	1954	1985	31	11,441
146	Green River (KY)	KY	37.50	1	1950	2003	53	15,114
147	Green River (KY)	KY	37.50	2	1950	2003	53	15,279
148	Henderson I	KY	5.00	3	1951	1971	20	12,336
149	Henderson I	KY	5.00	4	1951	1971	20	12,332
150	Henderson I	KY	32.30	6	1968	2008	40	12,258
151	Henderson I	KY	11.50	5	1956	2008	52	13,881
152	Owensboro	KY	34.50	4	1954	1978	24	12,069
153	Owensboro	KY	8.00	3	1945	1974	29	12,390
154	Owensboro	KY	7.50	1	1939	1977	38	12,469
155	Owensboro	KY	7.50	2	1939	1977	38	12,469
156	Paddys Run	KY	69.00	4	1949	1981	32	11,847

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Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2

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Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate
								Btu/kWh
157	Paddys Run	KY	74.70	6	1952	1984	32	11,764
158	Paddys Run	KY	74.70	5	1950	1983	33	11,794
159	Paddys Run	KY	69.00	3	1947	1981	34	11,873
160	Paddys Run	KY	25.00	1	1942	1979	37	12,286
161	Paddys Run	KY	25.00	2	1942	1979	37	12,286
162	Pineville	KY	37.50	3	1951	2002	51	13,036
163	Indeck Turners Falls Energy CNTR	MA	21.90	GEN1	1989	1999	10	11,730
164	R Paul Smith Power Station	MD	15.00	1	1900	1990	90	12,891
165	R Paul Smith Power Station	MD	35.00	2	1900	1990	90	12,732
166	Advance	MI	22.00	3	1967	2000	33	12,500
167	Advance	MI	7.50	1	1953	2000	47	12,500
168	Advance	MI	7.50	2	1953	2000	47	12,500
169	Bayside (MI)	MI	14.00	4	1968	2002	34	12,000
170	Bayside (MI)	MI	7.50	3	1954	2002	48	15,500
171	Bayside (MI)	MI	5.00	2	1950	1999	49	12,352
172	Bayside (MI)	MI	2.50	1	1946	2002	56	15,500
173	Cargill Salt Inc	MI	0.70	DCTG	1935	2001	66	12,572
174	Cargill Salt Inc	MI	1.20	DCT	1935	2002	67	12,568
175	Coldwater	MI	3.00	ST5	1962	1999	37	12,219
176	Coldwater	MI	5.00	6	1962	1999	37	12,203
177	Coldwater	MI	3.00	ST4	1940	1999	59	12,489
178	Connors Creek	MI	2.00	48	1938	1981	43	12,524
179	Connors Creek	MI	2.00	47	1937	1981	44	12,537
180	Connors Creek	MI	2.00	42	1936	1981	45	12,549
181	Connors Creek	MI	2.00	41	1935	1981	46	12,562
182	Gladston (MI GSTONE)	MI	3.00	1	1955	1980	25	12,306
183	Gladston (MI GSTONE)	MI	3.00	2	1955	1980	25	12,306
184	J B Simms	MI	10.00	1	1961	1999	38	12,170
185	James de Young	MI	8.00	1	1940	1983	43	12,452
186	James de Young	MI	8.00	2	1940	1983	43	12,452
187	Marysville	MI	2.00	45	1931	1981	50	12,611
188	Marysville	MI	2.00	44	1928	1981	53	12,648
189	Marysville	MI	2.00	43	1927	1981	54	12,660
190	Marysville	MI	50.00	6	1930	1995	65	14,405
191	Marysville	MI	10.00	3	1900	1972	72	12,931
192	Marysville	MI	30.00	2	1900	1972	72	12,772
193	Marysville	MI	30.00	4	1900	1972	72	12,772
194	Marysville	MI	30.00	5	1900	1972	72	12,772
195	Mistersky	MI	20.00	2	1927	1979	52	12,518
196	Mistersky	MI	20.00	3	1927	1979	52	12,518
197	Mistersky	MI	20.00	4	1927	1979	52	12,518
198	Ottawa Street	MI	25.00	3	1951	1993	42	12,173
199	Ottawa Street	MI	25.00	2	1949	1993	44	12,206
200	Ottawa Street	MI	4.00	5	1939	1988	49	12,496
201	Ottawa Street	MI	25.00	1	1940	1993	53	12,308
202	Pennsalt	MI	2.50	11	1964	1985	21	12,197
203	Pennsalt	MI	2.50	18	1964	1985	21	12,197
204	Pennsalt	MI	5.00	12	1964	1985	21	12,177
205	Pennsalt	MI	6.00	14	1964	1985	21	12,169
206	Pennsalt	MI	6.00	15	1964	1985	21	12,169
207	Pennsalt	MI	7.50	16	1964	1985	21	12,158
208	Pennsalt	MI	7.50	17	1964	1985	21	12,158

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	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate
								Btu/kWh
209	Port Huron	MI	4.00	3	1969	1985	16	12,118
210	Port Huron	MI	2.00	2	1966	1985	19	12,171
211	Presque Isle	MI	37.50	2	1962	2006	44	11,406
212	Presque Isle	MI	25.00	1	1955	2006	51	11,537
213	Saginaw Station	MI	100.00	ST1	1920	1973	53	11,970
214	Trenton Channel	MI	4.00	45	1930	1977	47	12,607
215	Trenton Channel	MI	50.00	4	1926	1974	48	12,292
216	Trenton Channel	MI	50.00	5	1926	1974	48	12,292
217	Trenton Channel	MI	50.00	6	1926	1974	48	12,292
218	Trenton Channel	MI	2.00	33	1927	1977	50	12,660
219	Trenton Channel	MI	4.00	44	1927	1977	50	12,645
220	Trenton Channel	MI	50.00	1	1924	1974	50	12,317
221	Trenton Channel	MI	50.00	2	1924	1974	50	12,317
222	Trenton Channel	MI	50.00	3	1924	1974	50	12,317
223	Trenton Channel	MI	4.00	42	1924	1977	53	12,682
224	Trenton Channel	MI	4.00	43	1924	1977	53	12,682
225	Wyandotte (MI)	MI	6.00	2	1942	1984	42	12,443
226	Wyandotte (MI)	MI	4.00	1	1939	1984	45	12,496
227	Alexandria (MN)	MN	3.00	ST3	1949	1981	32	12,372
228	Benson (MN BENSON)	MN	0.30	1	1940	1982	42	12,513
229	Benson (MN BENSON)	MN	0.30	2	1929	1981	52	12,649
230	Black Dog	MN	81.00	1	1952	2001	49	11,250
231	Blue Earth	MN	2.00	3	1944	1987	43	12,450
232	Blue Earth	MN	1.50	2	1938	1984	46	12,528
233	Canby	MN	5.00	2	1942	1975	33	12,451
234	Canby	MN	3.00	1	1931	1975	44	12,603
235	Crookston	MN	5.00	2	1949	1975	26	12,365
236	Crookston	MN	5.00	1	1948	1975	27	12,377
237	Detroit Lakes	MN	2.00	2	1937	1982	45	12,537
238	Hibbing	MN	2.50	2	1941	1983	42	12,483
239	Hibbing	MN	5.00	1	1941	1984	43	12,464
240	Hibbing	MN	1.50	4	1941	1995	54	12,491
241	High Bridge	MN	50.00	4	1944	1991	47	12,070
242	High Bridge	MN	163.20	6	1959	2007	48	12,084
243	High Bridge	MN	50.00	3	1942	1991	49	12,095
244	High Bridge	MN	113.60	5	1956	2007	51	12,356
245	High Bridge	MN	35.00	2	1928	1991	63	12,386
246	High Bridge	MN	32.00	1	1924	1991	67	12,460
247	Hoot Lake	MN	7.50	1	1948	2005	57	12,350
248	Litchfield	MN	3.00	ST1	1948	1990	42	12,393
249	Litchfield	MN	1.00	ST2	1930	1977	47	12,631
250	Madison (MN)	MN	1.00	1	1949	1970	21	12,396
251	Minnesota Valley	MN	46.00	3	1953	2006	53	13,256
252	Moorhead	MN	25.00	7	1970	1999	29	11,944
253	Moorhead	MN	6.00	5	1952	1984	32	12,320
254	Moorhead	MN	3.00	4	1948	1984	36	12,393
255	Moorhead	MN	3.00	3	1940	1984	44	12,492
256	New Ulm	MN	6.00	2	1946	1984	38	12,394
257	North Broadway	MN	8.00	2	1936	1982	46	12,502
258	North Broadway	MN	5.00	1	1931	1982	51	12,587
259	Ortonville	MN	16.50	1	1950	1983	33	12,261
260	Riverside Repowering Project (MN)	MN	6.00	7	1949	1976	27	12,357

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Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate Btu/kWh
261	Riverside Repowering Project (MN)	MN	35.00	2	1931	1987	56	12,342
262	Sleepy Eye	MN	1.25	4	1960	1986	26	12,252
263	Springfield (MN)	MN	0.80	1	1937	1976	39	12,546
264	Springfield (MN)	MN	4.00	4	1961	2002	41	13,500
265	Springfield (MN)	MN	2.00	3	1946	1996	52	12,426
266	Springfield (MN)	MN	1.00	2	1940	1994	54	12,508
267	Virginia	MN	5.00	1	1949	1992	43	12,365
268	Virginia	MN	2.50	4	1937	1996	59	12,533
269	Virginia	MN	1.50	3	1930	1996	66	12,627
270	Virginia	MN	1.00	2	1922	1990	68	12,730
271	Willmar	MN	1.00	2	1928	1976	48	12,656
272	Willmar	MN	4.00	ST1	1949	2006	57	12,364
273	Chillicothe	MO	2.50	4	1939	1982	43	12,508
274	Chillicothe	MO	6.00	6	1958	2004	46	12,237
275	Chillicothe	MO	1.50	3	1929	1980	51	12,640
276	Chillicothe	MO	5.00	5	1948	2004	56	12,372
277	Chillicothe	MO	2.50	4A	1938	2004	66	12,515
278	Coleman (MO)	MO	6.30	1	1959	1985	26	12,223
279	Columbia (MO CLMBIA)	MO	8.50	2	1947	1975	28	12,362
280	Columbia (MO CLMBIA)	MO	5.00	1	1938	1975	37	12,501
281	Columbia (MO CLMBIA)	MO	4.00	4	1929	1975	46	12,620
282	Fulton (MO)	MO	6.00	4	1959	1982	23	12,233
283	Fulton (MO)	MO	3.00	3	1949	1982	33	12,381
284	Fulton (MO)	MO	2.00	2	1940	1982	42	12,500
285	Fulton (MO)	MO	1.00	1	1935	1982	47	12,569
286	Grand Avenue	MO	30.00	8	1936	1982	46	12,327
287	Hannibal	MO	10.00	2	1951	1990	39	12,300
288	Hannibal	MO	17.00	3	1937	1990	53	12,418
289	Hannibal	MO	8.00	1	1936	1990	54	12,502
290	Hawthorne (MO)	MO	112.50	3	1953	1984	31	11,457
291	Hawthorne (MO)	MO	69.00	1	1951	1984	33	11,827
292	Hawthorne (MO)	MO	69.00	2	1951	1984	33	11,826
293	Southeast Missouri State Univ	MO	6.20	GEN3	1972	2007	35	12,071
294	Wright (MS)	MS	2.50	5	1926	1981	55	12,669
295	Buck Steam Station (NC)	NC	35.00	1	1926	1981	55	12,402
296	Buck Steam Station (NC)	NC	35.00	2	1926	1981	55	12,402
297	Cape Fear	NC	122.28	4	1943	1994	51	11,504
298	Cape Fear	NC	31.25	3	1942	1994	52	12,235
299	Enka	NC	0.30	GEN8	1984	2001	17	11,970
300	Enka	NC	5.00	GE12	1959	2001	42	12,241
301	Enka	NC	4.00	GE11	1957	2001	44	12,274
302	Enka	NC	4.00	GE10	1948	2001	53	12,385
303	Enka	NC	3.00	GEN9	1937	2001	64	12,529
304	Kannapolis Energy PRTNR Spencer	NC	2.50	GEN3	1965	2000	35	12,187
305	Kannapolis Energy PRTNR Spencer	NC	1.00	GEN1	1939	2000	61	12,520
306	Kannapolis Energy PTNRS	NC	15.00	GEN3	1971	2003	32	12,014
307	Kannapolis Energy PTNRS	NC	7.50	GEN2	1950	2003	53	12,333
308	Plymouth (NC)	NC	7.50	TG6	1956	2006	50	12,259
309	Plymouth (NC)	NC	7.50	TG4	1949	2002	53	12,343
310	Riverbend (NC)	NC	55.00	1	1929	1981	52	12,206
311	Riverbend (NC)	NC	55.00	2	1929	1981	52	12,205
312	Tobaccoville Utility Plant	NC	40.30	GEN1	1985	2004	19	11,634

Data Request No.: MIEC 4-21

RESPONSE

Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2

Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate Btu/kWh
313	Tobaccoville Utility Plant	NC	40.30	GEN2	1985	2004	19	11,632
314	Beulah	ND	7.50	3	1949	1986	37	12,335
315	Beulah	ND	2.50	1	1927	1985	58	12,656
316	Beulah	ND	3.50	2	1927	1985	58	12,648
317	Drayton (MNKOTA)	ND	6.80	1	1965	2002	37	12,145
318	G F Wood	ND	5.00	1	1949	1983	34	12,353
319	G F Wood	ND	11.50	3	1951	1985	34	12,287
320	G F Wood	ND	5.00	2	1950	1985	35	12,351
321	William J Neal	ND	25.00	1	1952	1991	39	12,166
322	William J Neal	ND	25.00	2	1952	1991	39	12,166
323	Fremont 1	NE	10.00	5	1950	1976	26	12,313
324	Fremont 1	NE	5.00	4	1946	1976	30	12,402
325	Fremont 1	NE	3.00	3	1932	1976	44	12,591
326	Fremont 1	NE	3.00	1	1928	1976	48	12,640
327	Fremont 1	NE	2.00	2	1924	1976	52	12,697
328	Harold Kramer	NE	45.50	3	1951	1991	40	12,019
329	Harold Kramer	NE	45.50	1	1949	1991	42	12,044
330	Harold Kramer	NE	45.50	2	1949	1991	42	12,044
331	Jones St	NE	10.00	10	1937	1974	37	12,473
332	Jones St	NE	25.00	9	1929	1974	45	12,453
333	Jones St	NE	20.00	8	1925	1974	49	12,542
334	Jones St	NE	20.00	7	1921	1974	53	12,592
335	Jones St	NE	15.00	6	1917	1974	57	12,681
336	Daepwater (NJ)	NJ	27.20	7	1957	1994	37	12,086
337	Daepwater (NJ)	NJ	20.00	5	1942	1994	52	12,330
338	Howard M Down	NJ	4.00	4	1936	1979	43	12,533
339	Missouri Avenue	NJ	29.00	6	1950	1974	24	12,162
340	Missouri Avenue	NJ	29.00	7	1950	1974	24	12,162
341	Raton	NM	1.50	3	1937	1970	33	12,541
342	Raton	NM	0.80	1	1937	1977	40	12,546
343	Raton	NM	0.80	2	1937	1977	40	12,546
344	Raton	NM	3.70	4	1951	1996	45	12,341
345	Mohave (NV)	NV	818.10	1	1971	2005	34	9,864
346	Mohave (NV)	NV	818.10	2	1971	2005	34	9,864
347	AES Greenidge	NY	20.00	2	1942	1985	43	12,328
348	AES Greenidge	NY	20.00	1	1938	1985	47	12,380
349	AES Westover	NY	30.00	6	1900	1972	72	12,772
350	Deferiet New York	NY	8.10	WEST	1946	2007	61	12,376
351	Huntley Generating	NY	100.00	66	1954	2007	53	11,904
352	Huntley Generating	NY	100.00	65	1953	2007	54	11,479
353	Huntley Generating	NY	100.00	64	1948	2005	57	11,033
354	Huntley Generating	NY	80.00	63	1942	2003	61	11,938
355	Kodak Park Site	NY	6.30	12TG	1941	2000	59	12,447
356	Lovett	NY	200.60	LOV5	1969	2008	39	12,130
357	Lovett	NY	179.50	LOV4	1966	2007	41	11,537
358	Rochester Beebee	NY	81.60	12	1959	1999	40	11,626
359	Russell Station	NY	81.60	4	1957	2008	51	10,567
360	Russell Station	NY	62.50	3	1953	2008	55	10,646
361	Russell Station	NY	62.50	2	1950	2008	58	11,314
362	Russell Station	NY	46.00	1	1948	2008	60	11,484
363	Samuel A Carlson	NY	15.00	3	1938	1983	45	12,421
364	Samuel A Carlson	NY	13.00	4	1930	1978	48	12,536

Data Request No.: MIEC 4-21

RESPONSE

Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2

Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate
								Btu/kWh
365	Samuel A Carlson	NY	5.00	2	1924	1973	49	12,674
366	Acme (OH)	OH	6.00	TOPR	1973	1992	19	12,049
367	Acme (OH)	OH	112.50	6	1949	1992	43	11,511
368	Acme (OH)	OH	72.00	2	1951	1995	44	11,956
369	Acme (OH)	OH	72.00	5	1941	1992	51	11,923
370	Acme (OH)	OH	25.00	1	1937	1992	55	12,348
371	Acme (OH)	OH	35.00	4	1929	1992	63	12,370
372	Ashtabula	OH	46.00	6	1972	2003	31	12,811
373	Ashtabula	OH	46.00	7	1972	2003	31	12,811
374	Ashtabula	OH	46.00	8	1953	2002	49	12,811
375	Ashtabula	OH	46.00	9	1953	2003	50	12,811
376	Avon Lake	OH	233.00	8	1959	1987	28	10,422
377	Avon Lake	OH	50.00	5	1943	1983	40	12,074
378	Avon Lake	OH	35.00	4	1929	1983	54	12,366
379	Avon Lake	OH	35.00	3	1928	1983	55	12,380
380	Avon Lake	OH	35.00	1	1926	1983	57	12,405
381	Avon Lake	OH	35.00	2	1926	1983	57	12,403
382	Columbus (OH)	OH	15.00	8	1966	1987	21	12,075
383	Columbus (OH)	OH	13.00	6	1950	1977	27	12,289
384	Columbus (OH)	OH	13.00	7	1957	1987	30	12,203
385	Columbus (OH)	OH	8.00	1	1929	1977	48	12,588
386	Columbus (OH)	OH	8.00	3	1925	1987	62	12,638
387	Conesville	OH	148.00	1	1959	2006	47	9,562
388	Conesville	OH	136.00	2	1957	2006	49	9,562
389	Dover (OH)	OH	4.00	2	1944	2007	63	12,435
390	East Palestine	OH	7.50	4	1962	1982	20	12,184
391	East Palestine	OH	5.00	3	1950	1982	32	12,352
392	East Palestine	OH	2.50	1	1945	1982	37	12,433
393	East Palestine	OH	1.50	2	1935	1982	47	12,566
394	Edgewater (OH)	OH	69.00	3	1949	1993	44	11,856
395	Edgewater (OH)	OH	20.00	2	1924	1983	59	12,554
396	Frank M Tait	OH	147.05	5	1959	1987	28	11,110
397	Frank M Tait	OH	147.05	4	1958	1987	29	11,120
398	Goodyear	OH	7.50	T 3	1984	2006	22	11,908
399	Goodyear	OH	12.50	T 2	1977	2006	29	11,956
400	Goodyear	OH	7.50	T 1	1975	2006	31	12,014
401	Goodyear	OH	12.50	T 4	1953	2006	53	12,255
402	Gorge (OH)	OH	40.24	7	1948	1993	45	12,086
403	Gorge (OH)	OH	40.24	6	1943	1993	50	12,151
404	Hamilton	OH	10.00	4	1976	1986	10	11,986
405	Hamilton	OH	3.00	1	1929	1975	46	12,628
406	Hamilton	OH	3.00	2	1929	1975	46	12,628
407	Hamilton	OH	7.50	3	1929	1986	57	12,587
408	Lake Road (OH)	OH	85.00	11	1967	1993	26	12,000
409	Mad River	OH	23.00	3	1949	1985	36	12,221
410	Mad River	OH	20.00	2	1938	1985	47	12,371
411	Mad River	OH	25.00	1	1927	1985	58	12,472
412	McCracken Power Plant	OH	3.10	NO2	1988	2005	17	11,896
413	McCracken Power Plant	OH	5.00	NO1	1951	2005	54	12,340
414	Miami Fort	OH	65.00	4	1942	1982	40	11,966
415	Miami Fort	OH	65.00	3	1938	1982	44	12,014
416	Norwalk (OH)	OH	18.00	5	1969	1982	13	12,012

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RESPONSE

Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2
Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate Btu/kWh
417	Norwalk (OH)	OH	6.00	4	1957	1982	25	12,252
418	Norwalk (OH)	OH	3.00	3	1949	1982	33	12,376
419	Norwalk (OH)	OH	3.00	2	1938	1982	44	12,514
420	Orrville	OH	2.50	6	1940	1984	44	12,496
421	Orrville	OH	1.50	5	1928	1984	56	12,652
422	Painesville	OH	25.00	6	1976	1989	13	11,871
423	Painesville	OH	3.00	2	1946	1983	37	12,418
424	Painesville	OH	3.00	1	1941	1983	42	12,479
425	Philo	OH	125.00	6	1957	1975	18	11,315
426	Philo	OH	85.00	4	1942	1975	33	11,817
427	Philo	OH	85.00	5	1942	1975	33	11,817
428	Philo	OH	40.00	2	1928	1975	47	12,347
429	Philo	OH	109.00	3	1928	1975	47	11,800
430	Picway	OH	34.50	4	1949	1980	31	12,129
431	Picway	OH	30.00	3	1943	1980	37	12,238
432	Piqua	OH	0.80	10	1987	2007	20	11,917
433	Piqua	OH	1.00	5	1947	1987	40	12,421
434	Piqua	OH	4.00	1	1933	1975	42	12,570
435	Piqua	OH	4.00	2	1933	1975	42	12,570
436	Piqua	OH	20.00	7	1961	2007	46	14,709
437	Piqua	OH	12.50	6	1951	2007	56	12,281
438	Piqua	OH	7.50	4	1947	2007	60	12,370
439	Piqua	OH	4.00	3	1940	2007	67	12,484
440	Poston	OH	75.00	4	1954	1987	33	11,748
441	Poston	OH	69.00	3	1952	1987	35	11,817
442	Poston	OH	44.00	2	1950	1987	37	12,036
443	Poston	OH	44.00	1	1949	1987	38	12,046
444	R E Burger	OH	62.50	2	1947	1994	47	14,026
445	R E Burger	OH	62.50	1	1944	1994	50	12,964
446	Shelby Munic Light Plant	OH	12.50	1	1987	1999	32	12,076
447	St Marys (OH)	OH	10.00	6	1967	2007	40	12,100
448	St Marys (OH)	OH	2.50	4	1946	1996	50	12,422
449	St Marys (OH)	OH	6.00	5	1957	2007	50	13,800
450	Tidd P FBC	OH	115.00	2	1948	1979	31	11,505
451	Tidd P FBC	OH	70.00	1	1903	1995	92	12,418
452	Toronto	OH	69.00	6	1949	2003	54	14,423
453	Toronto	OH	69.00	7	1949	2003	54	13,241
454	Toronto	OH	35.00	5	1940	2003	63	13,125
455	Woodcock	OH	10.00	5	1950	1979	29	12,313
456	Woodcock	OH	10.00	4	1947	1979	32	12,350
457	Woodcock	OH	8.00	3	1941	1979	38	12,440
458	Woodcock	OH	5.00	1	1938	1979	41	12,501
459	Woodcock	OH	5.00	2	1938	1979	41	12,501
460	Amalgamated Sugar Nyssa	OR	12.00	1	1987	2005	18	11,832
461	Amalgamated Sugar Nyssa	OR	0.50	3	1942	2005	63	12,479
462	Amalgamated Sugar Nyssa	OR	1.50	2	1942	2005	63	12,471
463	Crawford (PA)	PA	35.00	2	1926	1978	52	12,411
464	Crawford (PA)	PA	35.00	1	1924	1978	54	12,436
465	Crawford (PA)	PA	5.00	4	1900	1977	77	12,970
466	Crawford (PA)	PA	42.00	3	1900	1977	77	12,677
467	Erle Mill	PA	14.00	GEN8	1971	2002	31	12,019
468	Erle Mill	PA	19.00	GEN7	1971	2002	31	11,979

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RESPONSE

Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2

Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate
								Btu/kWh
469	Erie Mill	PA	4.00	GEN4	1936	2002	66	12,528
470	Erie Mill	PA	7.50	GEN6	1936	2002	66	12,500
471	F R Phillips	PA	179.00	4	1956	2000	44	11,366
472	F R Phillips	PA	81.00	3	1950	2000	50	13,141
473	F R Phillips	PA	81.00	2	1949	2000	51	13,269
474	F R Phillips	PA	69.00	1	1943	2000	57	14,005
475	Front Street (PA)	PA	18.80	1	1953	1991	38	12,206
476	Front Street (PA)	PA	50.00	5	1952	1991	39	11,963
477	Front Street (PA)	PA	28.80	4	1944	1991	47	12,235
478	Front Street (PA)	PA	15.00	3	1928	1991	63	12,545
479	Front Street (PA)	PA	10.00	2	1917	1991	74	12,720
480	General Electric Erie PA Power	PA	14.00	STM3	1949	2003	54	12,293
481	General Electric Erie PA Power	PA	9.00	STM4	1939	2003	64	12,457
482	General Electric Erie PA Power	PA	5.00	STM2	1929	2003	74	12,612
483	Holtwood	PA	15.00	15	1900	1972	72	13,833
484	Holtwood	PA	15.00	16	1900	1972	72	13,833
485	Hunlock Power Station	PA	23.00	1	1959	1974	15	14,172
486	Lock Haven Mill	PA	24.70	GEN4	1984	2002	18	11,765
487	Lock Haven Mill	PA	5.00	GEN3	1946	2002	56	12,396
488	Lock Haven Mill	PA	5.00	GEN1	1938	2002	64	12,501
489	Martins Creek	PA	156.20	MC2	1956	2007	51	10,209
490	Martins Creek	PA	156.20	MC1	1954	2007	53	10,438
491	New Castle Plant	PA	35.00	2	1947	1993	46	13,646
492	New Castle Plant	PA	35.00	1	1939	1993	54	10,059
493	Richmond Generating Station	PA	165.00	12	1935	1983	48	11,262
494	Saxton	PA	11.00	2	1900	1979	79	12,923
495	Saxton	PA	37.00	3	1900	1979	79	12,716
496	Seward	PA	27.00	2	1942	1980	38	12,270
497	Seward	PA	35.00	3	1942	1980	38	12,206
498	Seward	PA	156.20	5	1957	2003	46	10,872
499	Seward	PA	62.00	4	1950	2003	53	12,954
500	Shippingport	PA	100.00	1	1957	1982	25	11,513
501	Sonoco Products Co	PA	2.50	2	1952	2005	53	12,348
502	Warren (PA)	PA	42.00	2	1949	2002	53	13,443
503	Warren (PA)	PA	42.00	1	1948	2002	54	13,443
504	Williamsburg	PA	28.30	5	1944	1991	47	12,235
505	Williamsburg	PA	6.00	1	1900	1990	90	12,962
506	Williamsburg	PA	9.00	3	1900	1990	90	12,939
507	Lockhart	SC	5.00	1	1921	1977	56	12,711
508	Kirk (SD)	SD	5.00	3	1961	1993	32	12,205
509	Kirk (SD)	SD	16.50	4	1956	1996	40	12,176
510	Kirk (SD)	SD	5.00	1	1935	1993	58	12,529
511	Kirk (SD)	SD	5.00	2	1935	1993	58	12,526
512	Lawrence (SD)	SD	23.00	3	1951	1977	26	12,197
513	Lawrence (SD)	SD	13.00	2	1949	1977	28	12,301
514	Lawrence (SD)	SD	12.00	1	1948	1977	29	12,322
515	Mitchell (SD)	SD	8.00	1	1948	1979	31	12,353
516	Mitchell (SD)	SD	8.00	3	1948	1979	31	12,353
517	Mitchell (SD)	SD	5.00	2	1929	1977	48	12,612
518	Mobridge	SD	8.00	2	1950	1977	27	12,329
519	Kingsport Mill	TN	4.00	NO4	1937	1999	62	12,521
520	Lowland	TN	0.30	GEN4	1985	2005	20	11,957

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RESPONSE

Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2

Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate Btu/kWh
521	Lowland	TN	5.00	GEN3	1951	2005	54	12,340
522	Lowland	TN	5.00	GEN5	1951	2005	54	12,340
523	Lowland	TN	5.00	GEN1	1947	2005	58	12,390
524	Lowland	TN	5.00	GEN2	1947	2005	58	12,390
525	Old Hickory Plant	TN	3.00	G10	1933	2002	69	12,578
526	Sadow	TX	121.00	GEN2	1954	2006	52	11,382
527	Sadow	TX	121.00	GEN3	1954	2006	52	11,377
528	Sadow	TX	121.00	GEN1	1953	2006	53	11,384
529	Cedar	UT	7.50	1	1945	1987	42	12,394
530	Cedar	UT	7.50	2	1945	1987	42	12,394
531	Geneva Steel	UT	50.00	GEN1	1944	2002	58	12,070
532	Hale	UT	46.00	2	1950	1991	41	12,021
533	Hale	UT	15.00	1	1936	1979	43	12,446
534	Provo	UT	2.50	3	1941	1989	48	12,481
535	Provo	UT	2.00	1	1940	1989	49	12,498
536	Provo	UT	2.00	2	1940	1989	49	12,498
537	Brantly	VA	11.00	3	1953	1980	27	12,264
538	Brantly	VA	11.00	2	1952	1980	28	12,270
539	Brantly	VA	6.00	1	1949	1980	31	12,352
540	Chesterfield	VA	69.00	2	1949	1981	32	11,850
541	Dan River (VA)	VA	6.00	GEN2	1952	2006	54	12,320
542	Dan River (VA)	VA	3.00	GEN1	1947	2006	59	12,405
543	Glen Lyn	VA	34.00	4	1927	1974	47	12,407
544	Glen Lyn	VA	34.00	3	1924	1974	50	12,444
545	Rock Tenn Co (VA)	VA	2.00	1	1977	2000	23	12,043
546	J Edward Moran	VT	10.00	2	1954	1985	31	12,263
547	Longview (WA COWLITZ)	WA	3.00	5	1900	1973	73	12,986
548	Longview (WA COWLITZ)	WA	8.00	1	1900	1973	73	12,946
549	Longview (WA COWLITZ)	WA	8.00	2	1900	1973	73	12,946
550	Longview (WA COWLITZ)	WA	8.00	4	1900	1973	73	12,946
551	Longview (WA COWLITZ)	WA	8.00	3	1900	1974	74	12,946
552	Washington State Univ	WA	2.00	GEN1	1963	2005	42	12,206
553	Bay Front	WI	5.00	3	1925	1986	61	12,661
554	Columbus Street	WI	10.00	3	1941	2003	62	14,945
555	Columbus Street	WI	5.00	2	1935	2003	68	12,538
556	East Wells	WI	15.00	1	1939	1982	43	12,409
557	Edgewater (WI)	WI	30.00	2	1942	1985	43	11,661
558	Edgewater (WI)	WI	30.00	1	1931	1980	49	12,389
559	Green Bay West Mill	WI	25.00	GEN8	1977	2004	27	11,860
560	Green Bay West Mill	WI	2.50	GEN4	1947	2002	55	12,409
561	Green Bay West Mill	WI	3.00	GEN3	1940	2002	62	12,492
562	Green Bay West Mill	WI	3.00	GEN2	1933	2002	69	12,578
563	Green Bay West Mill	WI	1.50	GEN1	1929	2002	73	12,640
564	Manasha (MNSHA)	WI	4.00	1	1949	1989	40	12,373
565	Manasha (MNSHA)	WI	4.00	2	1949	1989	40	12,373
566	North Oak Creek	WI	130.00	4	1957	1988	31	11,263
567	North Oak Creek	WI	130.00	3	1955	1988	33	11,288
568	North Oak Creek	WI	120.00	2	1954	1989	35	11,381
569	North Oak Creek	WI	120.00	1	1953	1989	36	11,395
570	Port Washington	WI	80.00	5	1950	1991	41	10,368
571	Port Washington	WI	80.00	4	1949	2002	53	13,963
572	Port Washington	WI	80.00	3	1948	2004	56	14,135

Data Request No.: MIEC 4-21

RESPONSE

Heat Rate of Retired Units from Schedule LWL-E1, Appendix A-2

Velocity Suite Database - April 2009

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line No.	Plant	State	Capacity MW	Unit	Year in Service	Retirement Year	Age at Retirement	Summer Heat Rate
								Btu/kWh
573	Port Washington	WI	80.00	2	1943	2004	61	13,963
574	Port Washington	WI	80.00	1	1935	2004	69	13,963
575	Pulliam	WI	30.00	4	1947	2007	60	14,372
576	Pulliam	WI	30.00	3	1943	2007	64	13,581
577	Richland Center	WI	7.50	4	1966	1987	21	12,135
578	Richland Center	WI	4.00	3	1953	1987	34	12,323
579	Richland Center	WI	1.50	2	1939	1985	46	12,516
580	Richland Center	WI	1.25	1	1937	1985	48	12,543
581	Wildwood	WI	16.50	5	1968	1994	26	12,039
582	Wildwood	WI	12.50	4	1962	1994	32	12,145
583	Cabin Creek (WV)	WV	85.00	9	1943	1981	38	11,797
584	Cabin Creek (WV)	WV	85.00	8	1942	1981	39	11,809
585	Cabin Creek (WV)	WV	22.00	4	1921	1974	53	12,576
586	Cabin Creek (WV)	WV	25.00	3	1919	1974	55	12,577
587	Rivesville	WV	11.00	1	1900	1973	73	12,923
588	Rivesville	WV	13.00	2	1900	1973	73	12,907
589	Rivesville	WV	22.00	3	1900	1973	73	12,835
590	Rivesville	WV	27.00	4	1900	1973	73	12,796
591	Windsor	WV	60.00	7	1941	1975	34	12,027
592	Windsor	WV	60.00	8	1941	1975	34	12,027
593	Neil Simpson	WY	3.00	1	1961	1980	19	12,232
594	Neil Simpson	WY	2.00	4	1948	1982	34	12,401
595	Neil Simpson	WY	1.00	2	1928	1980	52	12,656

Note: Line 52, Humboldt 4, was mistakenly left off of the original Appendix A-2