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FILE

PUCO EXHIBIT FILING

Date of Hearing: May 9, 2012

Case No. 10-2929-EL-UNC

PUCO Case Caption: Columbus Southern Power and Ohio Power

Volume X

List of exhibits being filed:

AEP Exhibit 132
AEP Exhibit 133
AEP Exhibit 134
AEP Exhibit 135
AEP Exhibit 136
AEP Exhibit 137
AEP Exhibit 141

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Reporter's Signature: Karen Gibson
Date Submitted: 5-15-12

1 BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

2 - - -

3 In the Matter of the :
Commission Review of the :
4 Capacity Charges of Ohio : Case No. 10-2929-EL-UNC
Power Company and Columbus:
5 Southern Power Company. :

6 - - -

7 PROCEEDINGS

8 before Ms. Greta See and Ms. Sarah Parrot, Attorney
9 Examiners, and Commissioner Andre Porter, at the
10 Public Utilities Commission of Ohio, 180 East Broad
11 Street, Room 11-A, Columbus, Ohio, called at 10:00
12 a.m. on Wednesday, May 9, 2012.

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14 VOLUME X

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21 ARMSTRONG & OKEY, INC.
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22 Columbus, Ohio 43215-5201
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25

PENGAD 800-631-6989
EXHIBIT
132
AEP

Diagram of Staff's Energy Margin Credit

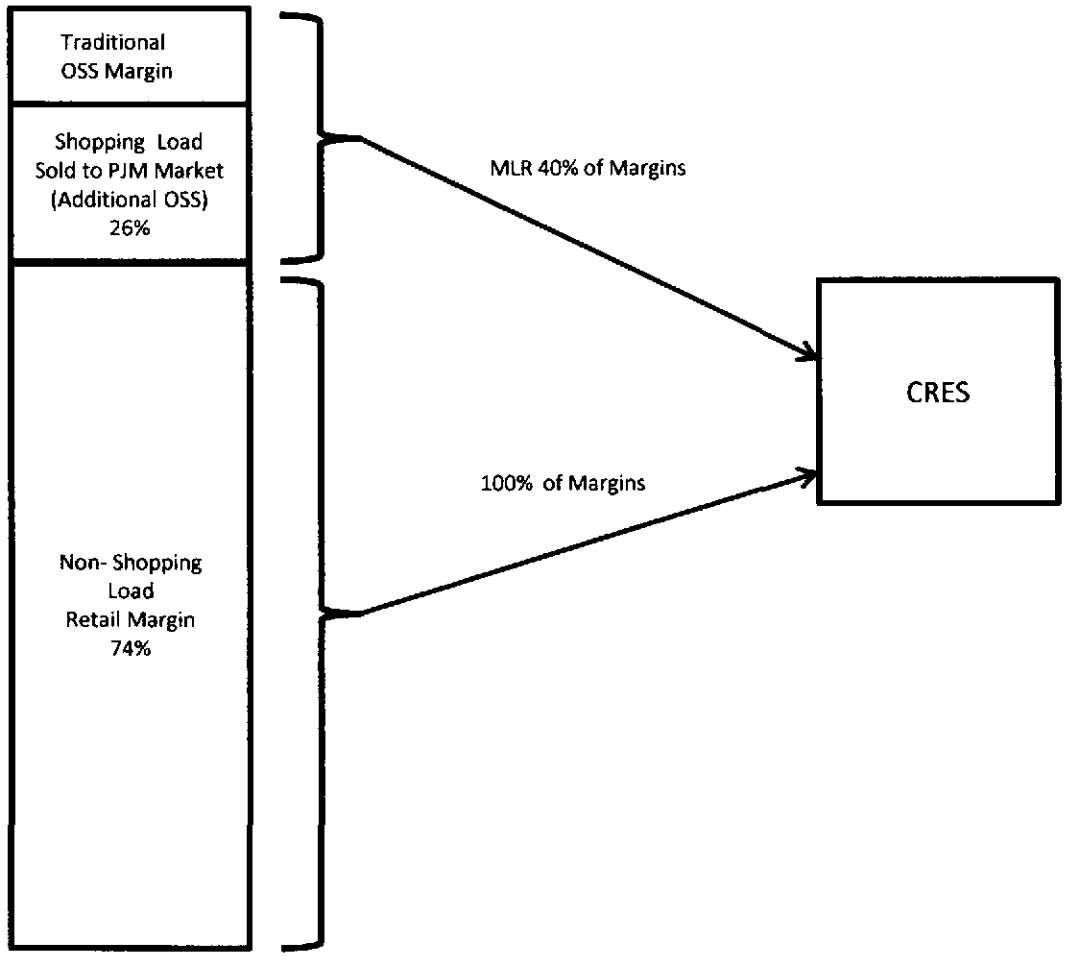

EXHIBIT
133
AEP

PENGAD 800-631-6989

Energy and Ancillary Service Credits for CSP, OPCo and AEP Ohio

Credits Provided by Year and as a Fixed Rate for the 6/1/2012-5/31/2015 Period

Energy Credits

	CSP	Year	Total Generation (MWh)	Off System Sales (MWh)	Gross Margin (2012 $)	MLR[1]	Retained Margin (2012 $)	Energy Credit ($/MWd)[2]
(1)	June-Dec	2012	9,238,414	822,462	57,483,325	19%	50,921,910	$57.67
(2)		2013	19,051,169	3,609,324	121,142,148	19%	98,376,727	$65.32
(3)		2014	16,603,470	2,041,381	119,843,987	19%	105,812,482	$70.26
(4)	Jan-May	2015	5,515,974	59,094	52,957,091	19%	52,411,263	$84.12
(5)		Total						$68.07

	OPCo	Year	Total Generation (MWh)	Off System Sales (MWh)	Gross Margin (2012 $)	MLR[1]	Retained Margin[1] (2012 $)	Energy Credit ($/MWd)[2]
(6)	June-Dec	2012	21,868,821	9,152,981	250,626,361	22%	170,178,962	$161.14
(7)		2013	25,629,397	3,857,070	426,080,707	22%	385,838,009	$214.20
(8)		2014	25,654,769	3,970,787	432,393,371	22%	391,453,715	$217.32
(9)	Jan-May	2015	11,281,816	2,296,000	188,181,389	22%	162,069,500	$217.49
(10)		Total						$205.32

	Merged	Year	Total Generation (MWh)	Off System Sales (MWh)	Gross Margin (2012 $)	MLR[1]	Retained Margin[1] (2012 $)	Energy Credit ($/MWd)[2]
(11)	June-Dec	2012	31,107,235	8,373,663	308,109,685	40%	254,734,719	$131.37
(12)		2013	44,680,567	5,987,661	547,222,855	40%	504,342,136	$152.50
(13)		2014	42,258,239	4,016,475	552,237,359	40%	521,922,064	$157.81
(14)	Jan-May	2015	16,797,789	1,155,836	241,138,479	40%	231,196,780	$168.98
(15)		Total						$152.41

AS Payments

		CSP	OPCO	Merged
(16)	**2011 AS Credits**	$10,037,014	$12,004,155	$22,041,169
(17)	**CP-5 (MW)**	4126	4935	9061
(18)	**AS Credit $/MWDay**	$6.66	$6.66	$6.66

1: The MLR is applied only to off system sales.

2: This calculation uses the 5 CP Demand numbers presented in KDP-5 and reprinted below.

		CSP	OPCO	Merged
(19)	**CP-5 (MW)**	4126	4935	9061

		AEP Projectd Retail Load (MWh)			Projected Generation (MWh)			Estimated OSS (MWh)		
Year	Datetime	Columbus Southern Power Co	Ohio Power Co	Merged	Columbus Southern Power Co	Ohio Power Co	Merged	Columbus Southern Power Co	Ohio Power Co	Merged
2012	2012_06_01 Hr 01	1,509	2,116	3,626	1,105	3,736	4,840	0	1,620	1,215
2012	2012_06_01 Hr 02	1,453	2,066	3,519	1,022	3,534	4,556	0	1,467	1,036
2012	2012_06_01 Hr 03	1,423	2,049	3,472	1,022	3,534	4,555	0	1,485	1,084
2012	2012_06_01 Hr 04	1,427	2,055	3,481	1,022	3,534	4,555	0	1,479	1,074
2012	2012_06_01 Hr 05	1,486	2,122	3,608	1,022	3,534	4,556	0	1,412	948
2012	2012_06_01 Hr 06	1,573	2,218	3,791	1,177	3,676	4,853	0	1,458	1,062
2012	2012_06_01 Hr 07	1,715	2,363	4,077	1,314	3,955	5,270	0	1,593	1,192
2012	2012_06_01 Hr 08	1,844	2,485	4,329	2,040	3,955	5,996	196	1,470	1,666
2012	2012_06_01 Hr 09	1,923	2,557	4,480	2,709	3,955	6,664	786	1,398	2,184
2012	2012_06_01 Hr 10	1,988	2,606	4,595	2,765	3,956	6,720	777	1,349	2,126
2012	2012_06_01 Hr 11	2,038	2,634	4,672	2,455	4,761	7,216	417	2,127	2,544
2012	2012_06_01 Hr 12	2,058	2,646	4,704	2,772	4,761	7,533	714	2,115	2,828
2012	2012_06_01 Hr 13	2,082	2,661	4,743	3,540	4,761	8,301	1,458	2,100	3,558
2012	2012_06_01 Hr 14	2,087	2,655	4,741	2,811	4,761	7,572	724	2,107	2,831
2012	2012_06_01 Hr 15	2,084	2,626	4,710	2,222	4,761	6,984	138	2,136	2,274
2012	2012_06_01 Hr 16	2,076	2,596	4,671	2,222	4,761	6,984	147	2,166	2,312
2012	2012_06_01 Hr 17	2,046	2,569	4,615	2,222	4,761	6,983	176	2,192	2,369
2012	2012_06_01 Hr 18	2,028	2,521	4,549	2,222	4,761	6,983	194	2,240	2,434
2012	2012_06_01 Hr 19	1,985	2,469	4,453	2,009	4,761	6,770	25	2,292	2,317
2012	2012_06_01 Hr 20	1,936	2,425	4,360	2,160	4,761	6,922	225	2,336	2,561
2012	2012_06_01 Hr 21	1,920	2,441	4,361	2,003	4,761	6,764	83	2,320	2,403
2012	2012_06_01 Hr 22	1,837	2,346	4,182	1,995	4,761	6,756	158	2,415	2,574
2012	2012_06_01 Hr 23	1,691	2,168	3,859	1,364	4,685	6,049	0	2,517	2,190
2012	2012_06_01 Hr 24	1,551	2,013	3,564	1,205	3,800	5,005	0	1,787	1,441

								MLR	MLR	MLR
								19%	22%	40%
		OSS %			Total Margin ($000)			Retained Margin ($000)		
Year	Datetime	Columbus Southern Power Co	Ohio Power Co	Merged	Columbus Southern Power Co	Ohio Power Co	Merged	Columbus Southern Power Co	Ohio Power Co	Merged
2012	2012_06_01 Hr 01	0%	43%	25%	-$5.79	$10.99	$5.21	-$5.79	$7.28	$4.43
2012	2012_06_01 Hr 02	0%	42%	23%	-$6.98	$6.28	-$0.70	-$6.98	$4.25	-$0.70
2012	2012_06_01 Hr 03	0%	42%	24%	-$7.53	$4.23	-$3.30	-$7.53	$2.84	-$3.30
2012	2012_06_01 Hr 04	0%	42%	24%	-$7.89	$3.28	-$4.61	-$7.89	$2.21	-$4.61
2012	2012_06_01 Hr 05	0%	40%	21%	-$7.16	$6.05	-$1.11	-$7.16	$4.17	-$1.11
2012	2012_06_01 Hr 06	0%	40%	22%	-$5.89	$9.35	$3.46	-$5.89	$6.46	$3.01
2012	2012_06_01 Hr 07	0%	40%	23%	-$0.44	$26.84	$26.40	-$0.44	$18.42	$22.84
2012	2012_06_01 Hr 08	10%	37%	28%	$5.57	$49.16	$54.73	$5.14	$34.92	$45.68
2012	2012_06_01 Hr 09	29%	35%	33%	-$0.69	$52.56	$51.87	-$0.69	$38.07	$41.74
2012	2012_06_01 Hr 10	28%	34%	32%	$21.29	$67.86	$89.15	$16.43	$49.82	$72.36
2012	2012_06_01 Hr 11	17%	45%	35%	$29.83	$88.85	$118.68	$25.71	$57.91	$93.76
2012	2012_06_01 Hr 12	26%	44%	38%	$26.14	$90.51	$116.66	$20.67	$59.18	$90.57
2012	2012_06_01 Hr 13	41%	44%	43%	$32.06	$98.66	$130.72	$21.32	$64.74	$97.35
2012	2012_06_01 Hr 14	26%	44%	37%	$38.90	$100.07	$138.97	$30.74	$65.56	$108.03
2012	2012_06_01 Hr 15	6%	45%	33%	$36.40	$104.10	$140.50	$34.56	$67.70	$113.26
2012	2012_06_01 Hr 16	7%	45%	33%	$38.30	$109.07	$147.37	$36.24	$70.40	$118.31
2012	2012_06_01 Hr 17	8%	46%	34%	$36.53	$104.11	$140.64	$34.18	$66.74	$112.23
2012	2012_06_01 Hr 18	9%	47%	35%	$34.20	$98.92	$133.12	$31.77	$62.65	$105.49
2012	2012_06_01 Hr 19	1%	48%	34%	$24.98	$86.57	$111.55	$24.74	$54.08	$88.82
2012	2012_06_01 Hr 20	10%	49%	37%	$26.35	$78.03	$104.38	$24.12	$48.18	$81.37
2012	2012_06_01 Hr 21	4%	49%	36%	$22.77	$74.50	$97.26	$22.01	$46.20	$76.69
2012	2012_06_01 Hr 22	8%	51%	38%	$18.88	$68.19	$87.06	$17.66	$41.23	$67.31
2012	2012_06_01 Hr 23	0%	54%	36%	$1.59	$30.10	$31.70	$1.59	$17.50	$24.86
2012	2012_06_01 Hr 24	0%	47%	29%	-$3.75	$13.03	$9.28	-$3.75	$8.25	$7.69

Time Period	AEP Zone Price (2012 $/MWh)
2012_06	$33.32
2012_07	$35.81
2012_08	$35.72
2012_09	$32.16
2012_10	$30.95
2012_11	$32.30
2012_12	$32.11
2013_01	$40.55
2013_02	$40.83
2013_03	$37.89
2013_04	$35.12
2013_05	$35.78
2013_06	$38.21
2013_07	$41.00
2013_08	$41.64
2013_09	$37.55
2013_10	$36.25
2013_11	$37.29
2013_12	$38.91
2014_01	$42.57
2014_02	$42.20
2014_03	$37.89
2014_04	$35.51
2014_05	$36.87
2014_06	$39.03
2014_07	$42.23
2014_08	$42.22
2014_09	$38.26
2014_10	$37.24
2014_11	$37.97
2014_12	$40.57
2015_01	$43.25
2015_02	$43.89
2015_03	$38.35
2015_04	$35.75
2015_05	$36.58

Generation (MWh)						
Utility	Name	ID	2012	2013	2014	2015
OPCO	Cardinal	2828-1	2,680,992	4,572,720	4,572,720	1,891,519
OPCO	Cardinal	2828-2	0	0	0	0
OPCO	Cardinal	2828-3	0	0	0	0
CSP	Walter C Beckjord	2830-6	115,745	1,942	7,670	20,216
CSP	Conesville	2840-3	444,031	0	0	0
CSP	Conesville	2840-4	1,376,981	2,575,123	2,512,688	997,476
CSP	Conesville	2840-5	1,170,893	2,126,457	2,091,505	852,113
CSP	Conesville	2840-6	1,066,426	1,993,266	1,955,637	820,312
CSP	Picway	2843-5	23,388	0	0	0
CSP	J M Stuart	2850-1	490,143	905,398	937,452	360,154
CSP	J M Stuart	2850-2	607,974	1,125,612	1,087,054	438,639
CSP	J M Stuart	2850-3	580,821	1,121,429	1,085,715	431,685
CSP	J M Stuart	2850-4	590,286	1,103,652	1,059,314	426,818
CSP	J M Stuart	2850-D1	0	71	12	0
CSP	J M Stuart	2850-D2	0	73	12	0
CSP	J M Stuart	2850-D3	0	72	12	0
CSP	J M Stuart	2850-D4	0	72	12	0
OPCO	Muskingum River	2872-1	723,672	0	0	0
OPCO	Muskingum River	2872-2	720,723	0	0	0
OPCO	Muskingum River	2872-3	617,241	55	0	0
OPCO	Muskingum River	2872-4	827,059	0	0	0
OPCO	Muskingum River	2872-5	2,170,555	13,003	0	371,106
OPCO	Philip Sporn	3938-2	355,947	54,890	61,749	65,216
OPCO	Philip Sporn	3938-4	362,151	60,607	66,110	77,310
OPCO	Kammer	3947-1	598,899	42,895	59,515	136,135
OPCO	Kammer	3947-2	294,288	17,795	23,523	58,152
OPCO	Kammer	3947-3	295,068	18,731	26,083	60,902
CSP	Darby Electric Generating Station	55247-GT1	15,218	78,594	32,676	1,330
CSP	Darby Electric Generating Station	55247-GT2	15,600	75,801	34,489	1,299
CSP	Darby Electric Generating Station	55247-GT3	10,960	62,563	22,050	628
CSP	Darby Electric Generating Station	55247-GT4	10,543	52,273	22,411	635
CSP	Darby Electric Generating Station	55247-GT5	10,069	59,026	20,970	255
CSP	Darby Electric Generating Station	55247-GT6	8,518	50,142	21,604	972
CSP	Lawrenceburg Energy Facility	55502-100	155,275	698,529	433,328	16,423
CSP	Lawrenceburg Energy Facility	55502-1100	108,239	472,448	302,803	12,161
CSP	Lawrenceburg Energy Facility	55502-1200	105,908	468,839	296,887	13,910
CSP	Lawrenceburg Energy Facility	55502-200	155,740	694,091	414,489	13,472
CSP	Lawrenceburg Energy Facility	55502-2100	105,542	470,171	302,686	13,401
CSP	Lawrenceburg Energy Facility	55502-2200	102,601	470,473	303,238	15,541
CSP	AEP Waterford Facility	55503-CTG1	94,483	385,767	240,755	4,179
CSP	AEP Waterford Facility	55503-CTG2	93,422	393,878	244,953	4,185
CSP	AEP Waterford Facility	55503-CTG3	93,496	392,395	243,849	4,023
CSP	AEP Waterford Facility	55503-ST1	160,806	682,752	386,838	0
OPCO	Racine	6006-1	9,544	17,504	17,504	7,960
OPCO	Racine	6006-2	9,544	17,504	17,504	7,960
CSP	W H Zimmer	6019-ST1	1,525,307	2,590,260	2,542,364	1,066,146
OPCO	General James M Gavin	8102-1	6,101,568	10,406,813	10,403,928	4,301,187
OPCO	General James M Gavin	8102-2	6,101,568	10,406,880	10,406,132	4,304,370
			31,107,235	44,680,567	42,258,239	16,797,789

Fuel Cost ($/MWh)						
Utility	Name	ID	2012	2013	2014	2015
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG1	30.53	32.97	34.97	38.91
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG2	30.55	32.99	35.00	38.90
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG3	30.54	32.98	34.99	38.90
Columbus Southern Power Co	AEP Waterford Facility	55503-ST1	30.78	32.88	34.85	38.98
Columbus Southern Power Co	Conesville	2840-3	26.20	0.00	0.00	0.00
Columbus Southern Power Co	Conesville	2840-4	23.92	24.57	25.59	25.95
Columbus Southern Power Co	Conesville	2840-5	25.77	26.64	27.55	27.82
Columbus Southern Power Co	Conesville	2840-6	26.67	27.44	28.35	28.62
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT1	39.11	40.88	43.87	49.21
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT2	39.10	40.88	43.93	49.22
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT3	39.08	40.91	43.67	49.11
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT4	38.91	40.79	43.74	49.11
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT5	39.11	40.86	43.95	49.00
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT6	38.99	40.67	43.53	49.38
Columbus Southern Power Co	Picway	2843-5	35.62	0.00	0.00	0.00
Ohio Power Co	General James M Gavin	8102-1	13.26	13.64	14.47	14.82
Ohio Power Co	General James M Gavin	8102-2	13.02	13.39	14.20	14.55
Ohio Power Co	Kammer	3947-1	26.50	26.46	28.25	29.30
Ohio Power Co	Kammer	3947-2	26.66	26.64	28.46	29.44
Ohio Power Co	Kammer	3947-3	26.71	26.67	28.43	29.42
Ohio Power Co	Mitchell	3948-1	23.72	24.71	26.10	26.80
Ohio Power Co	Mitchell	3948-2	23.67	24.67	26.07	26.62
Ohio Power Co	Muskingum River	2872-1	24.07	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-2	24.02	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-3	24.81	31.14	0.00	0.00
Ohio Power Co	Muskingum River	2872-4	23.31	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-5	25.82	28.44	0.00	30.36
Ohio Power Co	Racine	6006-1	0.00	0.00	0.00	0.00
Ohio Power Co	Racine	6006-2	0.00	0.00	0.00	0.00
Ohio Power Co	Cardinal	2828-1	14.03	15.01	15.99	16.37
Ohio Power Co	Cardinal	2828-2	13.85	14.81	15.79	16.16
Ohio Power Co	Cardinal	2828-3	20.04	17.32	13.78	14.13
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-100	30.12	32.51	34.69	38.65
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1100	30.10	32.44	34.70	38.58
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1200	30.10	32.44	34.73	38.58
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-200	30.14	32.47	34.63	38.61
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2100	30.08	32.44	34.72	38.58
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2200	30.07	32.45	34.72	38.62
Columbus Southern Power Co	J M Stuart	2850-1	24.77	24.63	25.28	26.26
Columbus Southern Power Co	J M Stuart	2850-2	22.95	22.93	23.95	24.77
Columbus Southern Power Co	J M Stuart	2850-3	23.71	23.47	24.55	25.34
Columbus Southern Power Co	J M Stuart	2850-4	23.36	23.32	24.37	25.16
Columbus Southern Power Co	J M Stuart	2850-D1	0.00	48.16	51.85	58.53
Columbus Southern Power Co	J M Stuart	2850-D2	0.00	48.16	51.85	58.53
Columbus Southern Power Co	J M Stuart	2850-D3	0.00	48.16	51.85	58.53
Columbus Southern Power Co	J M Stuart	2850-D4	0.00	48.16	51.85	58.53
Columbus Southern Power Co	W H Zimmer	6019-ST1	15.95	16.52	17.06	17.26
Ohio Power Co	Philip Sporn	3938-2	28.07	29.75	31.80	32.41
Ohio Power Co	Philip Sporn	3938-4	28.03	29.70	31.75	32.25
Ohio Power Co	Philip Sporn	3938-5	0.00	0.00	0.00	0.00
Columbus Southern Power Co	Walter C Beckjord	2830-6	26.10	28.06	30.29	31.69

VOM ($/MWh)						
Utility	Name	ID	2012	2013	2014	2015
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG1	6.35	6.35	6.35	6.35
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG2	6.35	6.35	6.35	6.35
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG3	6.35	6.35	6.35	6.35
Columbus Southern Power Co	AEP Waterford Facility	55503-ST1	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Conesville	2840-3	5.28	0.00	0.00	0.00
Columbus Southern Power Co	Conesville	2840-4	5.28	5.28	5.28	5.28
Columbus Southern Power Co	Conesville	2840-5	5.28	5.28	5.28	5.28
Columbus Southern Power Co	Conesville	2840-6	5.28	5.28	5.28	5.28
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT1	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT2	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT3	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT4	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT5	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT6	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Picway	2843-5	5.28	0.00	0.00	0.00
Ohio Power Co	General James M Gavin	8102-1	5.28	5.28	5.28	5.28
Ohio Power Co	General James M Gavin	8102-2	5.28	5.28	5.28	5.28
Ohio Power Co	Kammer	3947-1	5.28	5.28	5.28	5.28
Ohio Power Co	Kammer	3947-2	5.28	5.28	5.28	5.28
Ohio Power Co	Kammer	3947-3	5.28	5.28	5.28	5.28
Ohio Power Co	Mitchell	3948-1	5.28	5.28	5.28	5.28
Ohio Power Co	Mitchell	3948-2	5.28	5.28	5.28	5.28
Ohio Power Co	Muskingum River	2872-1	5.28	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-2	5.28	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-3	5.28	5.28	0.00	0.00
Ohio Power Co	Muskingum River	2872-4	5.28	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-5	5.28	5.28	0.00	5.28
Ohio Power Co	Racine	6006-1	3.88	3.88	3.88	3.88
Ohio Power Co	Racine	6006-2	3.88	3.88	3.88	3.88
Ohio Power Co	Cardinal	2828-1	5.28	5.28	5.28	5.28
Ohio Power Co	Cardinal	2828-2	5.28	5.28	5.28	5.28
Ohio Power Co	Cardinal	2828-3	5.28	5.28	5.28	5.28
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-100	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1100	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1200	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-200	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2100	6.35	6.35	6.35	6.35
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2200	6.35	6.35	6.35	6.35
Columbus Southern Power Co	J M Stuart	2850-1	5.28	5.28	5.28	5.28
Columbus Southern Power Co	J M Stuart	2850-2	5.28	5.28	5.28	5.28
Columbus Southern Power Co	J M Stuart	2850-3	5.28	5.28	5.28	5.28
Columbus Southern Power Co	J M Stuart	2850-4	5.28	5.28	5.28	5.28
Columbus Southern Power Co	J M Stuart	2850-D1	0.00	6.35	6.35	6.35
Columbus Southern Power Co	J M Stuart	2850-D2	0.00	6.35	6.35	6.35
Columbus Southern Power Co	J M Stuart	2850-D3	0.00	6.35	6.35	6.35
Columbus Southern Power Co	J M Stuart	2850-D4	0.00	6.35	6.35	6.35
Columbus Southern Power Co	W H Zimmer	6019-ST1	5.28	5.28	5.28	5.28
Ohio Power Co	Philip Sporn	3938-2	5.28	5.28	5.28	5.28
Ohio Power Co	Philip Sporn	3938-4	5.28	5.28	5.28	5.28
Ohio Power Co	Philip Sporn	3938-5	0.00	0.00	0.00	0.00
Columbus Southern Power Co	Walter C Beckjord	2830-6	5.28	5.28	5.28	5.28

Emission Cost ($/MWh)						
Utility	Name	ID	2012	2013	2014	2015
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG1	0.02	0.18	0.18	0.09
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG2	0.02	0.18	0.18	0.09
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG3	0.02	0.18	0.18	0.09
Columbus Southern Power Co	AEP Waterford Facility	55503-ST1	0.02	0.18	0.18	0.09
Columbus Southern Power Co	Conesville	2840-3	0.28	0.00	0.00	0.00
Columbus Southern Power Co	Conesville	2840-4	0.03	1.44	1.38	0.84
Columbus Southern Power Co	Conesville	2840-5	0.17	3.48	3.41	1.92
Columbus Southern Power Co	Conesville	2840-6	0.18	3.40	3.33	1.87
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT1	0.02	0.27	0.28	0.14
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT2	0.02	0.27	0.28	0.14
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT3	0.06	0.68	0.69	0.35
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT4	0.06	0.68	0.69	0.35
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT5	0.06	0.68	0.69	0.35
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT6	0.06	0.68	0.69	0.35
Columbus Southern Power Co	Picway	2843-5	0.30	0.00	0.00	0.00
Ohio Power Co	General James M Gavin	8102-1	0.04	2.78	2.65	1.61
Ohio Power Co	General James M Gavin	8102-2	0.04	2.77	2.63	1.60
Ohio Power Co	Kammer	3947-1	0.24	17.93	16.99	10.44
Ohio Power Co	Kammer	3947-2	0.25	18.14	17.22	10.54
Ohio Power Co	Kammer	3947-3	0.24	18.12	17.15	10.51
Ohio Power Co	Mitchell	3948-1	0.03	1.10	1.06	0.64
Ohio Power Co	Mitchell	3948-2	0.03	0.97	0.94	0.56
Ohio Power Co	Muskingum River	2872-1	0.33	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-2	0.32	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-3	0.33	46.68	0.00	0.00
Ohio Power Co	Muskingum River	2872-4	0.31	0.00	0.00	0.00
Ohio Power Co	Muskingum River	2872-5	0.05	14.68	0.00	8.46
Ohio Power Co	Racine	6006-1	0.00	0.00	0.00	0.00
Ohio Power Co	Racine	6006-2	0.00	0.00	0.00	0.00
Ohio Power Co	Cardinal	2828-1	0.02	1.94	1.84	1.13
Ohio Power Co	Cardinal	2828-2	0.03	1.56	1.49	0.90
Ohio Power Co	Cardinal	2828-3	0.03	0.85	0.82	0.48
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-100	0.01	0.16	0.16	0.08
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1100	0.01	0.16	0.16	0.08
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1200	0.01	0.16	0.16	0.08
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-200	0.01	0.16	0.16	0.08
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2100	0.01	0.16	0.16	0.08
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2200	0.01	0.16	0.16	0.08
Columbus Southern Power Co	J M Stuart	2850-1	0.06	2.10	1.99	1.19
Columbus Southern Power Co	J M Stuart	2850-2	0.07	1.99	1.92	1.13
Columbus Southern Power Co	J M Stuart	2850-3	0.06	1.28	1.26	0.72
Columbus Southern Power Co	J M Stuart	2850-4	0.06	1.76	1.71	1.00
Columbus Southern Power Co	J M Stuart	2850-D1	0.00	0.22	0.22	0.11
Columbus Southern Power Co	J M Stuart	2850-D2	0.00	0.22	0.22	0.11
Columbus Southern Power Co	J M Stuart	2850-D3	0.00	0.22	0.22	0.11
Columbus Southern Power Co	J M Stuart	2850-D4	0.00	0.22	0.22	0.11
Columbus Southern Power Co	W H Zimmer	6019-ST1	0.11	4.64	4.46	2.66
Ohio Power Co	Philip Sporn	3938-2	0.17	13.28	12.57	7.73
Ohio Power Co	Philip Sporn	3938-4	0.17	13.21	12.50	7.66
Ohio Power Co	Philip Sporn	3938-5	0.00	0.00	0.00	0.00
Columbus Southern Power Co	Walter C Beckjord	2830-6	0.22	14.90	14.17	8.88

Heatrate			
Utility	Name	ID	All Years
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG1	7,000
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG2	7,000
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG3	7,000
Columbus Southern Power Co	AEP Waterford Facility	55503-ST1	7,000
Columbus Southern Power Co	Conesville	2840-3	10,319
Columbus Southern Power Co	Conesville	2840-4	9,429
Columbus Southern Power Co	Conesville	2840-5	10,073
Columbus Southern Power Co	Conesville	2840-6	10,339
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT1	9,000
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT2	9,000
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT3	9,000
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT4	9,000
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT5	9,000
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT6	9,000
Columbus Southern Power Co	Picway	2843-5	11,079
Ohio Power Co	General James M Gavin	8102-1	9,635
Ohio Power Co	General James M Gavin	8102-2	9,461
Ohio Power Co	Kammer	3947-1	9,128
Ohio Power Co	Kammer	3947-2	9,186
Ohio Power Co	Kammer	3947-3	9,189
Ohio Power Co	Mitchell	3948-1	9,319
Ohio Power Co	Mitchell	3948-2	9,319
Ohio Power Co	Muskingum River	2872-1	9,448
Ohio Power Co	Muskingum River	2872-2	9,403
Ohio Power Co	Muskingum River	2872-3	9,634
Ohio Power Co	Muskingum River	2872-4	9,140
Ohio Power Co	Muskingum River	2872-5	9,073
Ohio Power Co	Racine	6006-1	0
Ohio Power Co	Racine	6006-2	0
Ohio Power Co	Cardinal	2828-1	9000
Ohio Power Co	Cardinal	2828-2	8883
Ohio Power Co	Cardinal	2828-3	9705
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-100	7000
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1100	7000
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1200	7000
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-200	7000
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2100	7000
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2200	7000
Columbus Southern Power Co	J M Stuart	2850-1	9381
Columbus Southern Power Co	J M Stuart	2850-2	9162
Columbus Southern Power Co	J M Stuart	2850-3	9370
Columbus Southern Power Co	J M Stuart	2850-4	9289
Columbus Southern Power Co	J M Stuart	2850-D1	10850
Columbus Southern Power Co	J M Stuart	2850-D2	10850
Columbus Southern Power Co	J M Stuart	2850-D3	10850
Columbus Southern Power Co	J M Stuart	2850-D4	10850
Columbus Southern Power Co	W H Zimmer	6019-ST1	9522
Ohio Power Co	Philip Sporn	3938-2	9442
Ohio Power Co	Philip Sporn	3938-4	9417
Ohio Power Co	Philip Sporn	3938-5	8924
Columbus Southern Power Co	Walter C Beckjord	2830-6	9680

EXHIBIT
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AEP
PENGAD 800-631-6989

AURORAxmp Resource_Month Output Table Example
Source: AORORAxmp model

Name	Year	Time_Period	Zone	Capability	Capacity
AEP Waterford Facility #CTG1-CTG3+ST1	2012	2012_05	PJM_AEP_East	752.9431	776.23
Cardinal #1	2012	2012_05	PJM_AEP_East	186.8226	585
Clifty Creek #1	2012	2012_05	PJM_AEP_East	112.9152	204.7
Clifty Creek #2	2012	2012_05	PJM_AEP_East	23.77161	204.7
Clifty Creek #3	2012	2012_05	PJM_AEP_East	184.23	204.7
Clifty Creek #4	2012	2012_05	PJM_AEP_East	184.23	204.7
Clifty Creek #5	2012	2012_05	PJM_AEP_East	184.23	204.7
Clifty Creek #6	2012	2012_05	PJM_AEP_East	184.23	204.7
Conesville #3	2012	2012_05	PJM_AEP_East	148.5	165
Conesville #4	2012	2012_05	PJM_AEP_East	702	780
Conesville #5	2012	2012_05	PJM_AEP_East	355.5	395
Conesville #6	2012	2012_05	PJM_AEP_East	337.5	375
Darby Electric Generating Station #GT1	2012	2012_05	PJM_DaytonP&L	65.3198	67.34
Darby Electric Generating Station #GT2	2012	2012_05	PJM_DaytonP&L	67.0852	69.16
Darby Electric Generating Station #GT3	2012	2012_05	PJM_DaytonP&L	66.2025	68.25
Darby Electric Generating Station #GT4	2012	2012_05	PJM_DaytonP&L	66.2025	68.25
Darby Electric Generating Station #GT5	2012	2012_05	PJM_DaytonP&L	65.3198	67.34
Darby Electric Generating Station #GT6	2012	2012_05	PJM_DaytonP&L	64.4371	66.43
Gen J M Gavin #1	2012	2012_05	PJM_AEP_East	843.0968	1320
Gen J M Gavin #2	2012	2012_05	PJM_AEP_East	996.3871	1320
J M Stuart #D1	2012	2012_05	PJM_DaytonP&L	1.96196	2.002
J M Stuart #D2	2012	2012_05	PJM_DaytonP&L	1.96196	2.002
J M Stuart #D3	2012	2012_05	PJM_DaytonP&L	1.96196	2.002
J M Stuart #D4	2012	2012_05	PJM_DaytonP&L	1.96196	2.002
JM Stuart #1 EIA2850	2012	2012_05	PJM_DaytonP&L	526.5	585
JM Stuart #2 EIA2850	2012	2012_05	PJM_DaytonP&L	526.5	585
JM Stuart #3 EIA2850	2012	2012_05	PJM_DaytonP&L	526.5	585
JM Stuart #4 EIA2850	2012	2012_05	PJM_DaytonP&L	526.5	585
John E Amos #3	2012	2012_05	PJM_AEP_East	566.129	1300
Kammer #1	2012	2012_05	PJM_AEP_East	110.3226	200
Kammer #2	2012	2012_05	PJM_AEP_East	180	200
Kammer #3	2012	2012_05	PJM_AEP_East	180	200

Full_Load_Cost	Dispatch_Cost	Net_Cost	Incr_Cost	Fixed_Cost	Nameplate_Capacity	Fixed_Cost_Base	Variable_OM_Cost
32.14568	39.002	32.46354	26.80485	863.387	921.6	863	1,271
25.30722	47.65145	25.30722	24.01943	1270.869	615.2	1,271	1,168
33.18117	58.50475	33.27833	26.49263	448.6879	217.2	449	574
32.53472	59.69831	32.53472	26.0125	448.6879	217.2	449	141
33.05375	30.45156	33.10228	26.47785	448.6879	217.2	449	1,036
33.09977	30.70865	33.12907	26.25311	448.6879	217.2	449	1,013
33.47025	32.46591	33.52999	26.50768	448.6879	217.2	449	938
33.6642	38.07981	34.31615	31.75116	448.6879	217.2	449	698
35.22657	51.56798	35.98991	33.13121	333.6239	161.5	334	459
30.79244	30.76039	31.04912	29.2956	1738.356	841.5	1,738	3,747
32.78138	39.71283	33.35577	30.99026	917.0008	443.9	917	1,545
33.4132	48.72726	34.09727	31.58768	917.0008	443.9	917	1,288
40.49974	42.52473	40.49974	40.49974	88.06247	94	88	7
40.49974	42.52474	40.49974	40.49974	88.06247	94	88	7
40.62292	42.65409	40.62292	40.62292	88.06247	94	88	4
40.62292	42.65409	40.62292	40.62292	88.06247	94	88	5
40.62292	42.65408	40.62292	40.62292	88.06247	94	88	5
40.62292	42.65406	40.62292	40.62292	88.06247	94	88	5
27.36403	46.87941	27.36403	23.63027	2685.517	1300	2,686	5,272
27.0142	46.34053	27.0142	23.35864	2685.517	1300	2,686	6,231
222.0099	233.1104		222.0099	2.424432	2.7	2	-
222.0099	233.1104		222.0099	2.424432	2.7	2	-
222.0099	233.1104		222.0099	2.424432	2.7	2	-
222.0099	233.1104		222.0099	2.424432	2.7	2	-
33.11318	45.0493	33.73826	31.39854	1260.54	610.2	1,261	1,826
32.54574	34.26933	32.93768	30.80898	1260.54	610.2	1,261	2,567
33.08902	39.85713	33.68787	31.36163	1260.54	610.2	1,261	2,110
32.89457	38.00578	33.37561	31.18731	1260.54	610.2	1,261	2,272
30.54846	73.60523	30.5548	25.97413	2685.517	1300	2,686	3,074
33.45813	59.4113	33.60195	26.57456	490.6233	237.5	491	550
33.62534	32.67414	33.70517	26.56661	490.6233	237.5	491	911
33.62906	32.70309	33.72759	26.58395	490.6233	237.5	491	909

Fixed_Cost_Aux1	Fixed_Cost_Aux2	Fuel_Cost	Fuel_Limit	Fuel_Usage	Full_Load_Heat_Rate	Net_Heat_Rate	Incr_Heat_Rate
0	0	4.149969	-1	2931860	7000	7076.52	5967.742
0	0	1.817581	-1	1250964	9000	9000	8314.286
0	0	2.468969	-1	644815.9	9407	9443.89	6941.455
0	0	2.468969	-1	153415.9	9151	9151	6677.5
0	0	2.468969	-1	1153405	9339	9357.384	6914.476
0	0	2.468969	-1	1120266	9284	9295.017	6750.363
0	0	2.468969	-1	1057199	9450	9472.524	6895.564
0	0	2.468969	-1	810301.8	9518	9763.667	9494.746
0	0	2.3534	-1	579890.3	10319	10612.68	10199.09
0	0	2.3534	-1	4251983	9429	9537.106	9219.422
0	0	2.3534	-1	1895549	10073	10310.35	10102.18
0	0	2.3534	-1	1627195	10339	10621.81	10395.81
0	0	4.149969	-1	19519.99	9000	9000	9000
0	0	4.149969	-1	19156.92	9000	9000	9000
0	0	4.149969	-1	12374.36	9000	9000	9000
0	0	4.149969	-1	13665.96	9000	9000	9000
0	0	4.149969	-1	14604.36	9000	9000	9000
0	0	4.149969	-1	15042.24	9000	9000	9000
0	0	1.870113	-1	6043689	9635	9635	7737.5
0	0	1.870113	-1	7013553	9461	9461	7602.5
0	0	22.70401	-1	0	9301		9301
0	0	22.70401	-1	0	9301		9301
0	0	22.70401	-1	0	9301		9301
0	0	22.70401	-1	0	9301		9301
0	0	2.60555	-1	2089368	9381	9618.326	9345.417
0	0	2.60555	-1	2843668	9162	9310.749	9016.705
0	0	2.60555	-1	2408897	9370	9597.325	9345.91
0	0	2.60555	-1	2559961	9289	9471.462	9204.282
0	0	2.384919	-1	3376036	9229	9231.646	7326.771
0	0	2.574031	-1	600520.5	9128	9180.399	6721.129
0	0	2.574031	-1	998861.1	9186	9215.073	6707.15
0	0	2.574031	-1	997284.9	9189	9224.896	6743.236

Minimum_Capacity	Output	Output_MWH	Output_MWH_Primary	Output_MWH_Secondary	Percent_Marginal
225.8829	556.8657	414308.1	414308.1	0	0
56.04678	186.8226	138996	138996	0	0
67.7491	91.77236	68278.64	68278.64	0	0
14.26297	22.53351	16764.93	16764.93	0	0
110.538	165.6741	123261.5	123261.5	0	0
110.538	161.9936	120523.3	120523.3	0	0
110.538	150.0092	111606.9	111606.9	0	0
55.269	111.5478	82991.55	82991.55	0	0
44.55	73.44258	54641.28	54641.28	0	0
210.6	599.2416	445835.7	445835.7	0	0
106.65	247.109	183849.1	183849.1	0	0
101.25	205.9055	153193.7	153193.7	0	0
0	2.915172	2168.888	2168.888	0	0
0	2.86095	2128.547	2128.547	0	0
0	1.848023	1374.929	1374.929	0	0
0	2.040914	1518.44	1518.44	0	0
0	2.181057	1622.707	1622.707	0	0
0	2.246451	1671.36	1671.36	0	0
505.8581	843.0968	627264	627264	0	0
597.8323	996.3871	741312	741312	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
157.95	291.9728	217227.8	217227.8	0	0
157.95	410.5077	305417.7	305417.7	0	0
157.95	337.3611	250996.7	250996.7	0	0
157.95	363.2815	270281.4	270281.4	0	0
339.6774	491.5357	365702.5	365702.5	0	0
66.19355	87.92114	65413.33	65413.33	0	0
108	145.6912	108394.3	108394.3	0	0
108	145.3065	108108	108108	0	0

Percent_Committed	Primary_Fuel_Usage	Revenue	Energy_Revenue	Capacity_Revenue	Secondary_Fuel_Limit
76.88172	2931860	24028.71	14527.03	9501.682	-1
35.48387	1250964	11813.05	4652.178	7160.872	-1
49.59678	644815.9	4830.533	2324.84	2505.693	-1
11.82796	153415.9	3067.411	561.7175	2505.693	-1
90.5914	1153405	6818.369	4312.675	2505.693	-1
87.90323	1120266	6726.994	4221.301	2505.693	-1
81.31721	1057199	6436.232	3930.539	2505.693	-1
81.04839	810301.8	5565.983	3060.29	2505.693	-1
67.47312	579890.3	4086.436	2066.702	2019.733	-1
100	4251983	25534.28	15986.45	9547.83	-1
91.80108	1895549	11495.68	6660.565	4835.119	-1
83.60215	1627195	10110.82	5520.515	4590.303	-1
0	19519.99	918.4652	94.16923	824.296	-1
0	19156.92	939.0803	92.5061	846.5742	-1
0	12374.36	895.8146	60.37952	835.4351	-1
0	13665.96	901.936	66.50087	835.4351	-1
0	14604.36	895.2211	70.92515	824.296	-1
0	15042.24	886.1341	72.97729	813.1568	-1
70.43011	6043689	37693.69	21535.82	16157.87	-1
83.87096	7013553	41607.92	25450.05	16157.87	-1
0	0	24.5061	0	24.5061	-1
0	0	24.5061	0	24.5061	-1
0	0	24.5061	0	24.5061	-1
0	0	24.5061	0	24.5061	-1
75.40323	2089368	15075.38	7914.511	7160.872	-1
95.56451	2843668	18302.98	11142.11	7160.872	-1
86.02151	2408897	16340.57	9179.7	7160.872	-1
88.30645	2559961	16993.37	9832.498	7160.872	-1
42.06989	3376036	28309.07	12396.02	15913.05	-1
49.32796	600520.5	4694.35	2246.189	2448.161	-1
81.31721	998861.1	6270.637	3822.476	2448.161	-1
81.18279	997284.9	6262.649	3814.488	2448.161	-1

Secondary_Fuel_Usage	Startup_Cost	Startups	Total_Fuel_Cost	Fuel $/MWh	Used_For_Op_Reserve	Non_Spin_Reserve
0	126.4882	10	12167.13	$ 29.37	0	0
0	0	1	2273.729	$ 16.36	0	0
0	0	8	1592.03	$ 23.32	0	0
0	0	2	378.779	$ 22.59	0	0
0	0	8	2847.722	$ 23.10	0	0
0	0	9	2765.901	$ 22.95	0	0
0	0	15	2610.191	$ 23.39	0	0
0	0	11	2000.61	$ 24.11	0	0
0	0	15	1364.714	$ 24.98	0	0
0	0	1	10006.62	$ 22.44	0	0
0	0	3	4460.985	$ 24.26	0	0
0	0	6	3829.441	$ 25.00	0	0
0	0	10	81.00735	$ 37.35	0	0
0	0	10	79.50062	$ 37.35	0	0
0	0	7	51.35321	$ 37.35	0	0
0	0	8	56.71332	$ 37.35	0	0
0	0	8	60.60764	$ 37.35	0	0
0	0	8	62.42482	$ 37.35	0	0
0	0	1	11302.38	$ 18.02	0	0
0	0	1	13116.13	$ 17.69	0	0
0	0	0	0	#DIV/0!	0	0
0	0	0	0	#DIV/0!	0	0
0	0	0	0	#DIV/0!	0	0
0	0	0	0	#DIV/0!	0	0
0	0	6	5443.951	$ 25.06	0	0
0	0	3	7409.318	$ 24.26	0	0
0	0	6	6276.501	$ 25.01	0	0
0	0	4	6670.105	$ 24.68	0	0
0	0	1	8051.572	$ 22.02	0	0
0	0	9	1545.758	$ 23.63	0	0
0	0	13	2571.1	$ 23.72	0	0
0	0	13	2567.043	$ 23.75	0	0

Non_Spin_Reserve_Revenue	Spin_Reserve	Spin_Reserve_Revenue	Input_Spin_Reserve	Input_Spin_Reserve_Revenue	Value
0	0	0	0	0	9588.925
0	0	0	0	0	7024.579
0	0	0	0	0	2109.646
0	0	0	0	0	2073.281
0	0	0	0	0	2289.444
0	0	0	0	0	2285.483
0	0	0	0	0	2245.367
0	0	0	0	0	2269.345
0	0	0	0	0	1786.277
0	0	0	0	0	9953.117
0	0	0	0	0	4446.254
0	0	0	0	0	3970.329
0	0	0	0	0	742.5634
0	0	0	0	0	764.8123
0	0	0	0	0	751.8985
0	0	0	0	0	752.19
0	0	0	0	0	741.2396
0	0	0	0	0	730.1761
0	0	0	0	0	17843.7
0	0	0	0	0	18896.45
0	0	0	0	0	22.08167
0	0	0	0	0	22.08167
0	0	0	0	0	22.08167
0	0	0	0	0	22.08167
0	0	0	0	0	6485.955
0	0	0	0	0	6982.688
0	0	0	0	0	6624.486
0	0	0	0	0	6712.021
0	0	0	0	0	14449.58
0	0	0	0	0	2005.712
0	0	0	0	0	2126.567
0	0	0	0	0	2125.803

Variable_OM_Cost_Base	Capacity_Factor	Revenue_MWh	Total_Cost_MWh	Value_MWh	Total_Emission_Cost	Total_Hours_Run
1271.025	0.7173979	35.06334	34.85276	23.14443	11.75773	583
1168.261	0.3193548	33.46987	34.45042	50.53799	75.61185	264
573.882	0.4483261	34.0493	39.84975	30.8976	106.2866	376
140.9092	0.1100806	33.50551	59.2982	123.6677	25.75405	91
1036.013	0.8093507	34.98801	36.7424	18.57388	196.5018	674
1012.998	0.791371	35.02478	36.8519	18.963	213.9242	657
938.0557	0.7328247	35.21772	37.55025	20.11854	193.9309	611
697.5439	0.544933	36.87472	39.72258	27.34429	149.797	604
459.26	0.4451066	37.82309	42.09562	32.69098	142.561	502
3747.249	0.7682584	35.85727	34.94822	22.32463	88.94217	744
1545.252	0.6255925	36.22843	38.34356	24.18426	126.1912	683
1287.593	0.5490814	36.03617	40.08317	25.91704	106.4542	624
6.653768	0.04329034	43.41821	81.10233	342.3706	0.1782754	34
6.530008	0.04136711	43.45975	81.87186	359.312	0.1749595	33
4.218041	0.02707726	43.91465	104.6717	546.8635	0.2823752	22
4.658309	0.02990351	43.79551	98.61826	495.3702	0.3118488	24
4.97818	0.03238874	43.70793	94.8918	456.7921	0.3332624	25
5.127439	0.03381682	43.66343	93.31203	436.8755	0.3432545	26
5272.154	0.6387097	34.33294	31.64535	28.44687	589.9396	528
6230.728	0.7548387	34.33109	30.63685	25.49055	679.0875	624
0	0				0	0
0	0				0	0
0	0				0	0
0	0				0	0
1825.799	0.4990988	36.43416	39.54111	29.85786	59.13668	563
2567.036	0.7017226	36.48153	37.06494	22.86275	83.39539	711
2109.627	0.5766857	36.57299	38.71001	26.39272	69.41681	642
2271.716	0.620994	36.37874	38.03942	24.83345	78.98859	658
3073.73	0.3781044	33.89645	37.89825	39.51184	48.6677	313
549.799	0.4396057	34.33839	41.10231	30.66212	102.4578	371
911.0538	0.7284561	35.26455	38.23145	19.61881	171.2933	609
908.6478	0.7265323	35.28405	38.26587	19.6637	170.5323	609

Beg_Date	End_Date	Primary_Fuel	Sec_Fuel	Report_Year	Report_Month	Report_Day	Report_Hour
8/1/2003	12/31/2054	RFC-Southwest NaturalGas-NonCycling		2012	5		
2/1/1967	12/31/2054	Coal US		2012	5		
2/1/1955	12/31/2054	Coal US		2012	5		
5/1/1955	12/31/2054	Coal US		2012	5		
7/1/1955	12/31/2054	Coal US		2012	5		
10/1/1955	12/31/2054	Coal US		2012	5		
11/1/1955	12/31/2054	Coal US		2012	5		
3/1/1956	12/31/2054	Coal US		2012	5		
10/1/1962	12/31/2054	Coal US		2012	5		
6/1/1973	12/31/2054	Coal US		2012	5		
11/1/1976	12/31/2054	Coal US		2012	5		
6/1/1978	12/31/2054	Coal US		2012	5		
6/1/2001	12/31/2054	RFC-Southwest NaturalGas-NonCycling		2012	5		
6/1/2001	12/31/2054	RFC-Southwest NaturalGas-NonCycling		2012	5		
5/1/2002	12/31/2054	RFC-Southwest NaturalGas-NonCycling		2012	5		
5/1/2002	12/31/2054	RFC-Southwest NaturalGas-NonCycling		2012	5		
5/1/2002	12/31/2054	RFC-Southwest NaturalGas-NonCycling		2012	5		
5/1/2002	12/31/2054	RFC-Southwest NaturalGas-NonCycling		2012	5		
10/1/1974	12/31/2054	Coal US		2012	5		
7/1/1975	12/31/2054	Coal US		2012	5		
10/1/1969	12/31/2054	No. 2 Peaking		2012	5		
10/1/1969	12/31/2054	No. 2 Peaking		2012	5		
10/1/1969	12/31/2054	No. 2 Peaking		2012	5		
10/1/1969	12/31/2054	No. 2 Peaking		2012	5		
5/1/1971	12/31/2054	Coal US		2012	5		
10/1/1970	12/31/2054	Coal US		2012	5		
5/1/1972	12/31/2054	Coal US		2012	5		
6/1/1974	12/31/2054	Coal US		2012	5		
10/1/1973	12/31/2054	Coal US		2012	5		
7/1/1958	12/31/2054	Coal US		2012	5		
11/1/1958	12/31/2054	Coal US		2012	5		
3/1/1959	12/31/2054	Coal US		2012	5		

Utility	Heat_Rate	Capacity1
Columbus Southern Power Co	7000	853000
Cardinal Operating Co	9000	585000
Indiana-Kentucky Electric Corp	9407	204700
Indiana-Kentucky Electric Corp	9151	204700
Indiana-Kentucky Electric Corp	9339	204700
Indiana-Kentucky Electric Corp	9284	204700
Indiana-Kentucky Electric Corp	9450	204700
Indiana-Kentucky Electric Corp	9518	204700
Columbus Southern Power Co	10319	165000
Columbus Southern Power Co	9429	780000
Columbus Southern Power Co	10073	395000
Columbus Southern Power Co	10339	375000
Columbus Southern Power Co	9000	74000
Columbus Southern Power Co	9000	76000
Columbus Southern Power Co	9000	75000
Columbus Southern Power Co	9000	75000
Columbus Southern Power Co	9000	74000
Columbus Southern Power Co	9000	73000
Ohio Power Co	9635	1320000
Ohio Power Co	9461	1320000
Dayton Power & Light Co	9301	2200
Dayton Power & Light Co	9301	2200
Dayton Power & Light Co	9301	2200
Dayton Power & Light Co	9301	2200
Dayton Power & Light Co	9381	585000
Dayton Power & Light Co	9162	585000
Dayton Power & Light Co	9370	585000
Dayton Power & Light Co	9289	585000
Appalachian Power Co	9229	1300000
Ohio Power Co	9128	200000
Ohio Power Co	9186	200000
Ohio Power Co	9189	200000

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Energy and Ancillary Service Credits for CSP, OPCo and AEP Ohio

Credits Provided by Year and as a Fixed Rate for the 6/1/2012-5/31/2015 Period

Energy Credits

	CSP	Year	Total Generation (MWh)	Off System Sales (MWh)	Gross Margin (2012 $)	MLR[1]	Retained Margin (2012 $)	Energy Credit ($/MWd)[2]	Forecasted Average Margin ($/MWh)
(1)	June-Dec	2012	9,238,414	822,462	57,483,325	19%	50,921,910	$57.67	$6.22
(2)		2013	19,051,169	3,609,324	121,142,148	19%	98,376,727	$65.32	$6.36
(3)		2014	16,603,470	2,041,381	119,843,987	19%	105,812,482	$70.26	$7.22
(4)	Jan-May	2015	5,515,974	59,094	52,957,091	19%	52,411,263	$84.12	$9.60
(5)		Total	50,409,027		351,426,550			$68.07	$6.97

	OPCo	Year	Total Generation (MWh)	Off System Sales (MWh)	Gross Margin (2012 $)	MLR[1]	Retained Margin[1] (2012 $)	Energy Credit ($/MWd)[2]	Forecasted Average Margin ($/MWh)
(6)	June-Dec	2012	21,868,821	9,152,981	250,626,361	22%	170,178,962	$161.14	$11.46
(7)		2013	25,629,397	3,857,070	426,080,707	22%	385,838,009	$214.20	$16.62
(8)		2014	25,654,769	3,970,787	432,393,371	22%	391,453,715	$217.32	$16.85
(9)	Jan-May	2015	11,281,816	2,296,000	188,181,389	22%	162,069,500	$217.49	$16.68
(10)		Total	84,434,803		1,297,281,828			$205.32	$15.36

	Merged	Year	Total Generation (MWh)	Off System Sales (MWh)	Gross Margin (2012 $)	MLR[1]	Retained Margin[1] (2012 $)	Energy Credit ($/MWd)[2]	Forecasted Average Margin ($/MWh)
(11)	June-Dec	2012	31,107,235	8,373,663	308,109,685	40%	254,734,719	$131.37	$9.90
(12)		2013	44,680,567	5,987,661	547,222,855	40%	504,342,136	$152.50	$12.25
(13)		2014	42,258,239	4,016,475	552,237,359	40%	521,922,064	$157.81	$13.07
(14)	Jan-May	2015	16,797,789	1,155,836	241,138,479	40%	231,196,780	$168.98	$14.36
(15)		Total	134,843,830		1,648,708,378			$152.41	$12.23

AS Payments

		CSP	OPCO	Merged
(16)	**2011 AS Credits**	$10,037,014	$12,004,155	$22,041,169
(17)	**CP-5 (MW)**	4126	4935	9061
(18)	**AS Credit $/MWDay**	$6.66	$6.66	$6.66

1: The MLR is applied only to off system sales.

2: This calculation uses the 5 CP Demand numbers presented in KDP-5 and reprinted below.

		CSP	OPCO	Merged
(19)	**CP-5 (MW)**	4126	4935	9061

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Value Column

Units = $000

The value, or profit margin, in thousands of currency units (dollars, euros, etc.) during the given time period. This is calculated as **total revenue** less **total cost**.

Total Revenue is the sum of Energy Revenue, Capacity Revenue, Spin_Reserve_Revenue , and Non_Spin_Reserve_Revenue .

Total Cost is calculated as the sum of up to five different components: (1) Total Fuel Cost and (2) Total Startup Cost, and optionally, (3) Total Variable O&M, (4) Total Fixed O&M, and (5) Total Emission Cost.

- Output Tables
  - Resource Output Table
    - Value Column

Source: AURORAxmp output table column definition

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COMPARISON OF GENERATION AND CAPACITY FACTORS FOR PLANTS THAT ARE NOT RETIRING

		MWH Generation				Capacity Factor		
	MW	2010	2011	2010 & 2011 Average	Staff Workppr	2010 & 2011 Average	EVA	Difference
CARDINAL (OPCO)	592	4,322,708	3,359,374	3,841,041	4,572,720	74%	88%	14%
CONESVILLE	1,304	5,027,864	5,495,840	5,261,852	6,694,846	46%	59%	13%
DARBY	473	38,093	35,249	36,671	378,399	1%	9%	8%
GAVIN	2,638	18,885,559	18,184,347	18,534,953	20,813,693	80%	90%	10%
LAWRENCEBURG	1,155	1,547,862	4,027,843	2,787,853	3,274,551	28%	32%	5%
STUART	600	3,462,349	3,643,435	3,552,892	4,256,379	68%	81%	13%
WATERFORD	830	1,221,136	2,431,293	1,826,215	1,854,792	25%	26%	0%
ZIMMER	330	2,462,245	1,786,574	2,124,410	2,590,260	73%	90%	16%

* Source of MWh is FF1, Pages 402 and 403. MW is average annual rating.

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Independent Statistics & Analysis
U.S. Energy Information Administration

May 2012

Short-Term Energy Outlook

Highlights

- EIA's current forecast of the average U.S. refiner acquisition cost of crude oil in 2012 is $110 per barrel, which is $2.50 per barrel lower than in last month's *Outlook*, but still about $8 per barrel higher than last year's average price. EIA expects the price of West Texas Intermediate (WTI) crude oil to average about $104 per barrel in 2012, about $2 per barrel lower than the forecast in last month's *Outlook*, but $9 per barrel higher than the 2011 average price. EIA expects crude oil prices to remain relatively flat in 2013.

- With falling global crude oil prices over the past month, EIA has lowered the average regular gasoline retail price forecast for the current April-through-September summer driving season to $3.79 per gallon, 16 cents per gallon below the level in the previous *Outlook*. EIA expects regular gasoline retail prices to average $3.71 per gallon in 2012 and $3.67 per gallon in 2013, compared with $3.53 per gallon in 2011. The September 2012 New York Harbor Reformulated Blendstock for Oxygenate Blending (RBOB) futures contract averaged $2.99 per gallon for the five trading days ending May 3. Based on the market value of futures and options contracts, there is a 22 percent probability that the RBOB contract price at expiration will exceed $3.30 per gallon, consistent with an average regular-grade gasoline retail price exceeding $4.00 per gallon in September.

- EIA expects U.S. total crude oil production to average 6.2 million barrels per day (bbl/d) in 2012, an increase of 0.5 million bbl/d from last year, and the highest level of production since 1998. Forecast lower-48 onshore crude oil production in 2012 averages over 4.3 million bbl/d, reaching its highest level since 1993. Projected U.S domestic crude oil production increases to 6.4 million bbl/d in 2013, driven primarily by growth in lower-48 onshore production.

- Very mild weather over the past winter contributed to natural gas working inventories that continue to set new record seasonal highs, with April 2012 ending at an estimated 2.61 trillion cubic feet (Tcf), about 46 percent more than the same time last year. EIA's average 2012 Henry Hub natural gas spot price forecast is $2.45 per million British thermal units (MMBtu), a decline of $1.55 per MMBtu from the 2011 average spot price. EIA expects that Henry Hub spot prices will average $3.17 per MMBtu in 2013.

Natural Gas

U.S. Natural Gas Consumption. EIA expects that natural gas consumption will average 70.2 billion cubic feet per day (Bcf/d) in 2012, an increase of 3.4 Bcf/d (5.1 percent) from 2011 and an upward revision of 0.6 Bcf/d from last month's *Outlook*. EIA expects that large gains in electric power use will offset declines in residential and commercial use. Because of the much-warmer-than-normal winter this year, EIA expects both residential and commercial consumption to fall by over 6 percent in 2012, reflecting a downward revision in projected consumption from last month's *Outlook*. The downward revisions in residential and commercial consumption reflect the decline in total projected 2012 heating degree-days as reported by the National Oceanic and Atmospheric Administration.

Projected consumption of natural gas in the electric power sector grows by almost 21 percent in 2012, primarily driven by the increasing relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector peaks in the third quarter of 2012, at 31.2 Bcf/d, when electricity demand for air conditioning is highest. This compares with 27.7 Bcf/d during the third quarter of 2011.

Growth in total natural gas consumption slows in 2013, with forecast consumption averaging 71.2 Bcf/d (U.S. Natural Gas Consumption Chart). However, unlike 2012, growth in 2013 is driven by consumption from the residential, commercial, and industrial sectors. A forecast of closer-to-normal winter temperatures drives increases in residential and commercial consumption in 2013 of 7.1 percent and 4.2 percent, respectively. The increase in consumption in these sectors, as well as a 1.4-percent increase in industrial consumption, more than offsets a 2.0-percent decline in power-sector natural gas burn.

U.S. Natural Gas Production and Imports. Total marketed production of natural gas grew by an estimated 4.8 Bcf/d (7.9 percent) in 2011. This strong growth was driven in large part by increases in shale gas production. While EIA expects year-over-year production growth to continue in 2012, the projected increases occur at a slower rate than in 2011 as low prices reduce new drilling plans. According to Baker Hughes, the natural gas rig count was 613 as of April 27, 2012, down from a 2011 high of 936 in mid-October, making it the lowest rig count since 2002. EIA's production survey indicates natural gas marketed production fell by 420 Bcf/d from January 2012 to February 2012. EIA expects growth in U.S. production during 2012 to average 4.4 percent. Declining production from less-profitable "dry" natural gas plays such as the Haynesville Shale are offset by growth in production from liquids-rich natural gas production areas such as the Eagle Ford and wet areas of the Marcellus Shale, and associated gas from the growth in domestic crude oil production.

EIA expects pipeline gross imports will fall by 0.3 Bcf/d (3.3 percent) in 2012 as domestic supply displaces Canadian sources. The warm winter in the United States also adds to the year-over-year decline in imports, particularly to the Northeast, where imported natural gas can serve as additional supply in times of very cold weather. EIA expects pipeline gross imports will increase

by 2.3 percent in 2013, partially due to near-normal winter weather driving higher residential and commercial demand. Additionally, EIA expects increased pipeline imports to help meet continued high demand for natural gas for electric power generation. Pipeline gross exports grew by 1.0 Bcf/d in 2011, driven by increased exports to Mexico, and are expected to continue to grow at a slower rate in 2012 and 2013.

Liquefied natural gas (LNG) imports are expected to fall by 0.3 Bcf/d (32 percent) in 2012. EIA expects that an average of about 0.7 Bcf/d will arrive in the United States (mainly at the Everett LNG terminal in New England and the Elba Island terminal in Georgia) in both 2012 and 2013, either to fulfill long-term contract obligations or to take advantage of temporarily high local prices due to cold snaps and disruptions.

U.S. Natural Gas Inventories. Working natural gas inventories continue to set new seasonal record highs as the very mild winter contributed to much-lower-than-normal inventory draws. As of April 27, 2012, according to EIA's *Weekly Natural Gas Storage Report*, working inventories totaled 2,576 Bcf, 840 Bcf greater than last year's level and 857 Bcf above the 5-year (2007-2011) average. EIA expects that inventory levels at the end of October 2012 will set a new record high at 4,096 Bcf (U.S. Working Natural Gas in Storage Chart), although the record will largely be due to high levels already present at the start of the injection season. The projected increase of 1,623 Bcf in working gas inventory during the 2012 injection season (from the end of March to the end of October) is the smallest build since 2002. Limits on storage capacity, as well as high demand from the electric power sector this summer, will limit the overall level of injections. In 2013, working inventory levels recede from record highs, although they will still remain robust compared with recent history.

U.S. Natural Gas Prices. Natural gas spot prices averaged $1.95 per MMBtu at the Henry Hub in April 2012, down $0.23 per MMBtu from the March 2012 average and the lowest average monthly price since March 1999, which also was the last time the Henry Hub price averaged less than $2 per MMBtu. Abundant supplies and lower winter heating demand this year have contributed to the recent low prices. EIA expects the Henry Hub natural gas price will average $2.45 per MMBtu in 2012, a small downward revision from $2.51 per MMBtu expected in last month's *Outlook*. EIA revised its forecast for 2013 down to $3.17 per MMBtu, from $3.40 per MMBtu in last month's *Outlook* (U.S. Natural Gas Prices Chart).

Natural gas futures prices for July 2012 delivery (for the 5-day period ending May 3, 2012) averaged $2.39 per MMBtu, and the average implied volatility based on options and futures prices was 51 percent (*Market Prices and Uncertainty Report*). Current options and futures prices imply that market participants place the lower and upper bounds for the 95-percent confidence interval for July 2012 contracts at $1.63 per MMBtu and $3.50 per MMBtu, respectively. At this time last year, the July 2011 natural gas futures contract averaged $4.65 per MMBtu and implied volatility averaged 34 percent. The corresponding lower and upper limits of the 95-percent confidence interval were $3.61 per MMBtu and $5.98 per MMBtu.

Table 5b. U.S. Regional Natural Gas Prices (dollars per thousand cubic feet)

U.S. Energy Information Administration | Short-Term Energy Outlook - May 2012

	2011				2012				2013				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2011	2012	2013
Wholesale/Spot															
U.S. Average Wellhead	**4.06**	**4.10**	**4.10**	**3.37**	**2.53**	*2.06*	*2.31*	*2.70*	*2.95*	*2.95*	*3.10*	*3.25*	**3.90**	*2.40*	*3.06*
Henry Hub Spot Price	**4.31**	**4.50**	**4.25**	**3.42**	**2.52**	*2.21*	*2.49*	*2.87*	*3.19*	*3.15*	*3.25*	*3.50*	**4.12**	*2.52*	*3.27*
Residential															
New England	**13.99**	**14.30**	**17.26**	**13.08**	**13.05**	*13.32*	*16.14*	*13.06*	*12.93*	*14.14*	*17.33*	*14.18*	**14.05**	*13.36*	*13.82*
Middle Atlantic	**11.84**	**14.11**	**18.14**	**12.66**	**11.21**	*12.52*	*16.41*	*12.42*	*11.18*	*13.00*	*17.47*	*13.62*	**12.83**	*12.20*	*12.56*
E. N. Central	**8.87**	**10.95**	**16.23**	**9.31**	**8.20**	*9.60*	*14.94*	*8.72*	*8.15*	*10.48*	*16.21*	*9.51*	**9.76**	*9.02*	*9.36*
W. N. Central	**8.83**	**11.17**	**16.78**	**9.51**	**8.46**	*10.66*	*15.75*	*8.64*	*8.12*	*10.54*	*16.75*	*9.38*	**9.80**	*9.30*	*9.29*
S. Atlantic	**11.97**	**17.55**	**22.89**	**13.51**	**12.15**	*16.57*	*22.19*	*12.86*	*11.99*	*17.36*	*23.61*	*13.82*	**13.78**	*13.68*	*13.90*
E. S. Central	**9.92**	**13.70**	**18.42**	**11.11**	**9.97**	*12.93*	*17.16*	*10.74*	*10.13*	*13.85*	*18.83*	*11.35*	**11.13**	*11.03*	*11.34*
W. S. Central	**8.60**	**14.31**	**19.03**	**10.16**	**9.01**	*12.41*	*17.32*	*9.67*	*8.23*	*13.44*	*18.70*	*10.64*	**10.47**	*10.41*	*10.34*
Mountain	**8.88**	**9.77**	**13.32**	**8.84**	**8.74**	*9.34*	*12.60*	*8.63*	*8.37*	*9.04*	*12.28*	*8.48*	**9.34**	*9.10*	*8.81*
Pacific	**9.97**	**10.91**	**11.63**	**9.92**	**9.07**	*9.01*	*10.01*	*9.12*	*9.31*	*9.67*	*10.58*	*9.61*	**10.34**	*9.18*	*9.62*
U.S. Average	**9.96**	**11.96**	**15.51**	**10.44**	**9.55**	*10.92*	*14.81*	*10.20*	*9.52*	*11.53*	*15.72*	*10.96*	**10.79**	*10.38*	*10.70*
Commercial															
New England	**11.16**	**10.64**	**10.43**	**10.45**	**10.22**	*9.81*	*10.34*	*10.85*	*10.88*	*10.62*	*11.02*	*11.43*	**10.83**	*10.35*	*10.99*
Middle Atlantic	**9.84**	**9.62**	**8.99**	**9.27**	**8.62**	*7.71*	*7.63*	*8.86*	*8.89*	*8.96*	*8.88*	*9.87*	**9.55**	*8.39*	*9.17*
E. N. Central	**8.35**	**8.98**	**9.85**	**7.88**	**7.39**	*7.52*	*7.95*	*7.49*	*7.65*	*8.34*	*8.95*	*8.34*	**8.45**	*7.50*	*8.06*
W. N. Central	**7.92**	**8.44**	**9.49**	**7.61**	**7.04**	*6.38*	*7.78*	*6.67*	*7.03*	*7.26*	*8.66*	*7.29*	**8.05**	*6.88*	*7.26*
S. Atlantic	**9.80**	**10.87**	**11.13**	**9.77**	**9.13**	*8.83*	*9.28*	*9.41*	*9.36*	*9.94*	*10.42*	*10.57*	**10.13**	*9.19*	*9.96*
E. S. Central	**8.82**	**9.59**	**10.39**	**9.24**	**8.72**	*8.81*	*9.15*	*9.18*	*8.81*	*9.46*	*10.04*	*9.93*	**9.22**	*8.93*	*9.34*
W. S. Central	**7.30**	**8.54**	**8.92**	**7.43**	**7.02**	*6.76*	*7.37*	*7.00*	*6.91*	*7.60*	*8.23*	*7.75*	**7.78**	*7.02*	*7.44*
Mountain	**8.00**	**8.00**	**8.91**	**7.71**	**7.37**	*6.56*	*7.32*	*7.08*	*6.84*	*6.83*	*7.93*	*7.74*	**8.01**	*7.12*	*7.21*
Pacific	**9.13**	**9.19**	**9.75**	**8.88**	**8.27**	*7.32*	*7.54*	*7.88*	*8.17*	*7.76*	*8.27*	*8.54*	**9.17**	*7.84*	*8.20*
U.S. Average	**8.75**	**9.15**	**9.71**	**8.51**	**8.05**	*7.59*	*8.04*	*8.10*	*8.13*	*8.40*	*8.99*	*8.93*	**8.85**	*7.99*	*8.52*
Industrial															
New England	**10.67**	**9.82**	**9.20**	**9.21**	**9.56**	*7.85*	*7.66*	*8.89*	*9.86*	*9.01*	*8.70*	*9.72*	**9.84**	*8.68*	*9.46*
Middle Atlantic	**9.58**	**9.28**	**8.88**	**9.24**	**8.32**	*7.01*	*7.23*	*8.86*	*8.77*	*7.75*	*7.92*	*9.50*	**9.36**	*8.02*	*8.64*
E. N. Central	**7.39**	**7.19**	**7.28**	**6.64**	**6.54**	*5.49*	*5.61*	*6.08*	*6.42*	*6.14*	*6.20*	*6.65*	**7.15**	*6.08*	*6.41*
W. N. Central	**6.27**	**5.77**	**5.55**	**5.54**	**5.23**	*3.51*	*3.63*	*4.44*	*5.05*	*4.06*	*4.22*	*4.90*	**5.81**	*4.24*	*4.61*
S. Atlantic	**6.53**	**6.23**	**6.07**	**5.71**	**5.04**	*4.27*	*4.44*	*5.09*	*5.48*	*5.12*	*5.36*	*5.92*	**6.15**	*4.73*	*5.48*
E. S. Central	**5.84**	**5.58**	**5.47**	**5.10**	**4.55**	*4.05*	*4.25*	*4.75*	*5.08*	*4.67*	*4.97*	*5.22*	**5.51**	*4.42*	*5.00*
W. S. Central	**4.29**	**4.51**	**4.39**	**3.64**	**2.90**	*2.58*	*2.83*	*3.02*	*3.27*	*3.40*	*3.61*	*3.64*	**4.21**	*2.83*	*3.48*
Mountain	**6.82**	**6.43**	**6.80**	**6.28**	**5.99**	*4.92*	*5.11*	*5.76*	*5.87*	*5.23*	*5.90*	*6.38*	**6.57**	*5.53*	*5.89*
Pacific	**7.45**	**7.21**	**7.21**	**6.85**	**6.37**	*5.32*	*5.34*	*6.21*	*6.45*	*5.79*	*6.13*	*6.90*	**7.18**	*5.87*	*6.35*
U.S. Average	**5.45**	**5.15**	**4.94**	**4.53**	**4.12**	*3.28*	*3.41*	*4.02*	*4.49*	*4.04*	*4.16*	*4.61*	**5.02**	*3.72*	*4.33*

- = no data available

Prices are not adjusted for inflation.

Notes: The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions.

See "Census division" in EIA's Energy Glossary (http://www.eia.doe.gov/glossary/index.html) for a list of States in each region.

Historical data: Latest data available from Energy Information Administration databases supporting the *Natural Gas Monthly*, DOE/EIA-0130.

Natural gas Henry Hub spot price from Reuter's News Service (http://www.reuters.com).

Minor discrepancies with published historical data are due to independent rounding.

Projections: Generated by simulation of the EIA Regional Short-Term Energy Model.