

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

- - -

In the Matter of the :  
Application Seeking :  
Approval of Ohio Power :  
Company's Proposal to : Case No. 14-1693-EL-RDR  
Enter into an Affiliate :  
Power Purchase Agreement :  
for Inclusion in the Power:  
Purchase Agreement Rider. :

In the Matter of the :  
Application of Ohio Power :  
Company for Approval of : Case No. 14-1694-EL-AAM  
Certain Accounting :  
Authority. :

- - -

COMPOSITE INDEX

- - -

VOLUME I THROUGH XVII

- - -

ARMSTRONG & OKEY, INC.  
222 East Town Street, Second Floor  
Columbus, Ohio 43215-5201  
(614) 224-9481 - (800) 223-9481  
Fax - (614) 224-5724

- - -

## INDEX

- - -

## WITNESSES PAGE

## Pablo A. Vegas

Direct Examination by Mr. Nourse I-41

Cross-Examination by Ms. Henry I-43

Cross-Examination by Ms. Bojko I-114

Cross-Examination by Mr. Michael I-164

Cross-Examination by Mr. Olier I-196

Cross-Examination by Mr. Darr I-210

Cross-Examination by Mr. Smalz I-230

Cross-Examination by Mr. Kurtz I-242

Cross-Examination by Mr. Petricoff I-257

Cross-Examination by Ms. Fleisher II-305

Further Cross-Examination by Ms. Bojko II-342

Redirect Examination by Mr. Nourse II-345

Recross-Examination by Mr. Olier II-350

Recross-Examination by Mr. Petricoff II-352

Recross-Examination by Ms. Fleisher II-357

## Kelly D. Pearce

Direct Examination by Mr. Nourse II-368

Cross-Examination by Mr. Bzdok II-371

Cross-Examination by Ms. Bojko II-432

Cross-Examination by Mr. Stinson II-488

Cross-Examination by Mr. Olier II-511

Cross-Examination by Mr. Yurick II-557

Cross-Examination by Mr. Smalz II-568

Cross-Examination by Ms. Fleisher II-570

Cross-Examination by Ms. Petrucci II-577

## Kelly D. Pearce

Cross-Examination by Mr. Pritchard III-621

Cross-Examination by Mr. Kurtz III-671

Further Cross-Examination by Mr. Bzdok III-709

Further Cross-Examination by Ms. Bojko III-722

Further Cross-Examination by Mr. Olier III-745

Further Cross-Examination by Ms. Fleisher III-763

Further Cross-Examination by Mr. Pritchard III-772

Redirect Examination by Mr. Nourse III-782

Recross-Examination by Ms. Bojko III-797

Recross-Examination by MR. Olier III-800

Recross-Examination by Mr. Kurtz III-805

Recross-Examination by Ms. Fleisher III-811

## INDEX (Continued)

- - -

WITNESSES	PAGE
Steven M. Fetter	
Direct Examination by Mr. Miller	III-816
Cross-Examination by Mr. Fisk	III-819
Cross-Examination by Ms. Bojko	III-851
Cross-Examination by Ms. Fleisher	III-882
Cross-Examination by Mr. Michael	III-884
Cross-Examination by Mr. Oliker	III-895
Cross-Examination by Mr. Darr	III-897
Cross-Examination by Mr. Yurick	III-919
Cross-Examination by Mr. Settineri	III-933
John M. McManus	
Direct Examination by Mr. Satterwhite	IV-953
Cross-Examination by Ms. Henry	IV-956
Cross-Examination by Mr. Darr	IV-1070
Cross-Examination by Ms. Ghiloni	IV-1073
Cross-Examination by Ms. Bair	IV-1075
Cross-Examination by Mr. Oliker	IV-1084
Cross-Examination by Ms. Fleisher	IV-1104
Further Cross-Examination by Ms. Henry	IV-1129
Further Cross-Examination by Ms. Ghiloni	IV-1147
Further Cross-Examination by Ms. Bair	IV-1150
Further Cross-Examination by Mr. Oliker	IV-1151
Further Cross-Examination by Ms. Fleisher	IV-1154
Toby L. Thomas	
Direct Examination by Mr. Nourse	IV-1167
Cross-Examination by Mr. Mendoza	IV-1169
Cross-Examination by Ms. Bojko	IV-1207
Cross-Examination by Mr. Stinson	IV-1212
Cross-Examination by Mr. Oliker	IV-1231
Cross-Examination by Mr. Darr	V-1258
Cross-Examination by Mr. Petricoff	V-1279
Cross-Examination by Ms. Fleisher	V-1301
Further Cross-Examination by Ms. Fleisher	V-1320
Redirect Examination by Mr. Nourse	V-1336
Recross-Examination by Mr. Mendoza	V-1339
Recross-Examination by Ms. Bair	V-1342
Recross-Examination by Mr. Petricoff	V-1349
Recross-Examination by Ms. Fleisher	V-1352

## INDEX (Continued)

- - -

	WITNESSES	PAGE
1	Karl R. Bletzacker	
2	Direct Examination by Mr. Conway	V-1366
3	Cross-Examination by Mr. Bzdok	V-1368
4	Cross-Examination by Ms. Bair	V-1439
5	Cross-Examination by Mr. Olikier	V-1442
6	Cross-Examination by Mr. Pritchard	V-1482
7	Cross-Examination by Mr. Yurick	V-1497
8	Cross-Examination by Ms. Fleisher	V-1505
9	Redirect Examination by Mr. Conway	V-1508
10	Recross-Examination by Mr. Olikier	V-1521
11	Robert W. Bradish	
12	Direct Examination by Mr. Miller	VI-1538
13	Cross-Examination by Mr. Fisk	VI-1540
14	Cross-Examination by Mr. Ghiloni	VI-1621
15	Cross-Examination by Mr. Moore	VI-1625
16	Cross-Examination by Mr. Olikier	VI-1632
17	Cross-Examination by Ms. Fleisher	VI-1634
18	Cross-Examination by Mr. Settineri	VI-1642
19	Renee V. Hawkins	
20	Direct Examination by Mr. Conway	VI-1649
21	Cross-Examination by Ms. Ghiloni	VI-1651
22	Cross-Examination by Mr. Moore	VI-1656
23	Cross-Examination by Mr. Olikier	VI-1661
24	Cross-Examination by Mr. Darr	VI-1680
25	Cross-Examination by Mr. Yurick	VI-1687
	Cross Examination by Ms. Cohn	VI-1694
	Cross-Examination by Mr. Settineri	VI-1696
	Thomas E. Mitchell	
	Direct Examination by Mr. McKenzie	VI-1701
	Cross-Examination by Ms. Bojko	VI-1703
	Cross-Examination by Mr. Moore	VI-1708
	Cross-Examination by Mr. Darr	VI-1712
	Cross-Examination by Mr. Yurick	VI-1721
	William A. Allen	
	Examination by Mr. Satterwhite	VII-1736
	Voir Dire Examination by Ms. Bojko	VII-1739
	Voir Dire Examination by Mr. Satterwhite	VII-1764
	Cross-Examination by Ms. Bojko	VII-1772
	Cross-Examination by Ms. Henry	VII-1839

## INDEX (Continued)

- - -

WITNESSES	PAGE
William A. Allen	
Cross-Examination by Mr. Michael	VII-1932
Cross-Examination by Mr. Oliker	VII-1936
Cross-Examination by Mr. Darr	VII-1941
Cross-Examination by Ms. Fleisher	VII-1994
Cross-Examination by Mr. Settineri	VII-2022
Redirect Examination by Mr. Satterwhite	VII-2047
Recross-Examination by Ms. Bojko	VII-2048
Eric J. Wittine	
Direct Examination by Mr. McKenzie	VIII-2079
Cross-Examination by Mr. Mendoza	VIII-2080
Cross-Examination by Ms. Bojko	VIII-2114
Cross-Examination by Mr. Stinson	VIII-2122
Cross-Examination by Mr. Settineri	VIII-2141
Cross-Examination by Mr. Darr	VIII-2175
Cross-Examination by Mr. Dougherty	VIII-2189
Redirect Examination by Mr. McKenzie	VIII-2191
Recross-Examination by Mr. Settineri	VIII-2196
Daniel J. Duann, Ph. D.	
Direct Examination by Mr. Moore	IX-2238
Cross-Examination by Mr. Conway	IX-2241
Beth E. Hixon	
Direct Examination by Mr. Michael	IX-2280
Cross-Examination by Mr. Miller	IX-2282
Noah C. Dormady, Ph.D.	
Direct Examination by Mr. Michael	IX-2312
Cross-Examination by Mr. Miller	IX-2313
Redirect Examination by Mr. Michael	
Recross-Examination by Mr. Miller	IX-2335
Kenneth Rose, Ph.D.	
Direct Examination by Mr. Michael	X-2450
Cross-Examination by Mr. McKenzie	X-2453
Joseph Haugen	
Direct Examination by Mr. Oliker	X-2492
Cross-Examination by Mr. McKenzie	X-2494
Redirect Examination by Mr. Oliker	X-2526

## INDEX (Continued)

- - -

WITNESSES	PAGE
Steve W. Chriss	
Direct Examination by Ms. Harris	X-2528
Cross-Examination by Mr. Conway	X-2530
Dean Ellis	
Direct Examination by Mr. Dortch	X-2546
Cross-Examination by Mr. Satterwhite	X-2548
Paul Leanza	
Direct Examination by Mr. Oliker	X-2597
Cross-Examination by Mr. Conway	X-2600
Paul L. Chernick	
Direct Examination by Ms. Henry	XI-2670
Cross-Examination by Mr. Kurtz	XI-2677
Cross-Examination by Mr. Nourse	XI-2686
Redirect Examination by Ms. Henry	XI-2872
Recross-Examination by Mr. Pritchard	XI-2906
Stephen J. Baron	
Direct Examination by Mr. Kurtz	XI-2911
Cross-Examination by Mr. Bzdok	XI-2913
Cross-Examination by Ms. Bojko	XI-2935
Cross-Examination by Ms. Petrucci	XI-2958
Cross-Examination by Mr. Pritchard	XI-2976
Cross-Examination by Mr. Satterwhite	XI-2992
Redirect Examination by Mr. Kurtz	XI-3001
Recross-Examination by Ms. Petrucci	XI-3003
Recross-Examination by Mr. Pritchard	XI-3006
Joseph E. Bowring	
Direct Examination by Mr. Mayes	XII-3034
Cross-Examination by Mr. Kurtz	XII-3035
Cross-Examination by Mr. McKenzie	XII-3042
Redirect Examination by Mr. Mayes	XII-3081
Recross-Examination by Mr. Kurtz	XII-3086
Recross-Examination by Mr. McKenzie	XII-3089
Diane Munns	
Direct Examination by Mr. Dougherty	XII-3101
Cross-Examination by Mr. Darr	XII-3104
Cross-Examination by Mr. Miller	XII-3105

1	INDEX (Continued)	
2	WITNESSES	PAGE
3	John Finnigan	
4	Direct Examination by Mr. Dougherty	XII-3132
5	Cross-Examination by Mr. Nourse	XII-3134
6	Bruce Burcat	
7	Direct Examination by Mr. O'Donnell	XIII-3180
8	Cross-Examination by Mr. Darr	XIII-3183
9	Cross-Examination by Mr. Kurtz	XIII-3197
10	Cross-Examination by Mr. Satterwhite	XIII-3202
11	Redirect Examination by Mr. O'Donnell	XIII-3216
12	Recross-Examination by Mr. Darr	XIII-3221
13	Recross-Examination by Mr. Kurtz	XIII-3225
14	Recross-Examination by Mr. Satterwhite	XIII-3230
15	Edward W. Hill	
16	Direct Examination by Ms. Bojko	XIII-3232
17	Voir Dire Examination by Mr. Nourse	XIII-3235
18	Cross-Examination by Mr. Nourse	XIII-3260
19	Redirect Examination by Ms. Bojko	XIII-3318
20	Recross-Examination by Mr. Nourse	XIII-3321
21	Alan Taylor	
22	Direct Examination by Mr. Kurtz	XIII-3326
23	Cross-Examination by Mr. Mendoza	XIII-3328
24	Cross-Examination by Ms. Bojko	XIII-3329
25	Cross-Examination by Ms. Bair	XIII-3330
26	Cross-Examination by Mr. Darr	XIII-3331
27	Cross-Examination by Mr. Nourse	XIII-3336
28	Redirect Examination by Mr. Kurtz	XIII-3359
29	Recross-Examination by Mr. Darr	XIII-3367
30	Recross-Examination by Mr. Nourse	XIII-3369
31	Lane Kollen	
32	Direct Examination by Mr. Kurtz	XIII-3376
33	Cross-Examination by Ms. Bojko	XIII-3377
34	Cross-Examination by Mr. Nourse	XIII-3385
35	Redirect Examination by Mr. Kurtz	XIII-3408
36	Recross-Examination by Mr. Darr	XIII-3415
37	Recross-Examination by Mr. Nourse	XIII-3417
38	Ramteen Sioshansi	
39	Direct Examination by Mr. Stinson	XIII-3419
40	Cross-Examination by Mr. McKenzie	XIII-3421
41	Redirect Examination by Mr. Stinson	XIII-3463

## INDEX (Continued)

- - -

WITNESSES	PAGE
A. Joseph Cavicchi	
Direct Examination by Mr. Petricoff	XIV-3480
Cross-Examination by Mr. Satterwhite	XIV-3485
Redirect Examination by Mr. Petricoff	XIV-3531
Recross-Examination by Mr. Satterwhite	XIV-3534
Kevin C. Higgins	
Direct Examination by Mr. Yurick	XIV-3539
Cross-Examination by Mr. Nourse	XIV-3542
Sarah E. Jackson	
Direct Examination by Ms. Bair	XIV-3554
Cross-Examination by Mr. Satterwhite	XIV-3557
Matthew White	
Direct Examination by Mr. Olikier	XIV-3586
Cross-Examination by Mr. Conway	XIV-3589
Redirect Examination by Mr. Olikier	XIV-3546
Recross-Examination by Mr. Conway	XIV-3645
Lael Campbell	
Direct Examination by Mr. Petricoff	XV-3659
Voir Dire Examination by Mr. Satterwhite	XV-3661
Cross-Examination by Mr. Satterwhite	XV-3677
Redirect Examination by Mr. Petricoff	XV-3745
Recross-Examination by Mr. Satterwhite	XV-3748
James E. Wilson	
Direct Examination by Mr. Michael	XV-3764
Cross-Examination by Mr. Conway	XV-3782
Redirect Examination by Mr. Michael	XV-3845
Jonathan A. Lesser, Ph.D	
Direct Examination by Mr. Darr	XVI-3865
Voir Dire Examination by Mr. Conway	XVI-3866
Cross-Examination by Mr. Conway	XVI-3868
Hisham N. Choueiki, Ph.D., P.E.	
Direct Examination by Mr. Margard	XVI-3889
Cross-Examination by Ms. Bojko	XVI-3891
Cross-Examination by Mr. Michael	XVI-3903
Cross-Examination by Mr. Darr	XVI-3928
Cross-Examination by Mr. Kurtz	XVI-3939
Cross Examination by Mr. Nourse	XVI-3953



## INDEX (Continued)

- - -

## WITNESSES

## PAGE

## Karl R. Bletzacker (Rebuttal)

Direct Examination by Mr. Conway	XVII-4070
Cross-Examination by Mr. Bzdok	XVII-4071
Cross-Examination by Mr. Olikier	XVII-4099
Cross-Examination by Ms. Bair	XVII-4150
Cross-Examination by Mr. Pritchard	XVII-4154
Cross-Examination by Mr. Kurtz	XVII-4168
Redirect Examination by Mr. Conway	XVII-4169
Recross-Examination by Mr. Olikier	XVII-4173

## William A. Allen (Rebuttal)

Direct Examination by Mr. Satterwhite	XVII-4185
Cross-Examination by Ms. Henry	XVII-4209
Cross-Examination by Ms. Bojko	XVII-4239
Cross-Examination by Mr. Michael	XVII-4319
Cross-Examination by Ms. Fleisher	XVII-4320
Cross-Examination (Cont.) by Mr. Michael	XVII-4340
Cross-Examination by Mr. Olikier	XVII-4343
Cross-Examination by Mr. Darr	XVII-4357
Cross-Examination by Mr. Settineri	XVII-4370
Cross-Examination by Mr. Kurtz	XVII-4407

- - -

## EXHIBITS

- - -

## COMPANY EXHIBITS

## IDENTIFIED

## ADMITTED

1	- Direct Testimony of Pablo A. Vegas	I-41	II-360
2	- Direct Testimony of Kelly D. Pearce	II-368	III-813
3	- Direct Testimony of Steven M. Fetter	III-816	III-940
4	- Direct Testimony of John M. McManus	IV-953	IV-1158
5	- Direct Testimony of Toby L. Thomas	IV-1167	V-1354

- - -

## INDEX (Continued)

- - -

3	COMPANY EXHIBITS	IDENTIFIED	ADMITTED
4	6 - Direct Testimony of Karl R. Bletzacker	V-1367	V-1523
5	7 - Direct Testimony of Robert W. Bradish	VI-1538	VI-1648
6	8 - Direct Testimony of Renee V. Hawkins	VI-1650	VI-1701
7	9 - Direct Testimony of Thomas E. Mitchell	VI-1702	VI-1723
8	10 - Direct Testimony of William A. Allen	VII-1739	VII-2059
9	in Support of AEP Ohio's Amended Application	VII-1739	VII-2059
10	11 - Direct Testimony of Eric J. Wittine	VIII-2079	VIII-2212
11	12 - OPSB Staff Report of Investigation,	VIII-2193	VIII-2212
12	Case No. 14-0591-EL-BLN	VIII-2193	VIII-2212
13	13 - Amended Application	VIII-2214	VIII-2214
14	14 - K. Rose Testimony before the Michigan House Energy and Technology Committee, 3/12/2013	X-2485	X-2491
15	15 - Transcript for the Dynegy Corporate Investor Day	X-2555	X-2597
16	16 - PowerPoint for the Dynegy Corporate Investor Day	X-2564	X-2597
17	17 - PowerPoint, Wolfe Research Power & Gas Leaders Conference	X-2579	X-2597
18	18 - EIA Annual Energy Outlook 2015	X-2604	X-2655

## INDEX (Continued)

- - -

COMPANY EXHIBITS	IDENTIFIED	ADMITTED
19 - Henry Hub Natural Gas Futures Settlements Report, 10/12/15	X-2623	X-2655
20 - Ohio Power Company Response to OCC Discovery, Interrogatory Set 5-184; and Request for Production of Documents, RPD 5-05	XI-2704	XI-2910
21 - Sierra Club website, "Why Move Beyond Natural Gas?"	XI-2723	XI-2910
22 - SNL Financial article, "Environmental groups burn bridges with gas industry at press conference"	XI-2732	--
23 - Entergy Press Release in re Pilgrim Nuclear Power Station Closing	XI-2740	XI-2910
24 - Comparison of Actual Net CONE to Chernick Forecast	XI-2794	XI-2910
25 - AEP-Dayton Hub Peak	XI-2824	XI-2910
26 - Data Sheet, AD Hub DA Peak	XI-2830	--
27 - PJM Load Forecast Report, January 2015	XI-2833	--
28 - PPA Unit Capacity Factors Workpaper (Confidential)	XI-2844	XI-2910
29 - Live Costs Worksheet (Confidential)	XI-2855	--

## INDEX (Continued)

- - -

COMPANY EXHIBITS	IDENTIFIED	ADMITTED
30 - IEU_RPD-1-003, Confidential Attachment 1-B (Confidential)	XI-2856	XI-2910
31 - AEP Price Forecasts, Low Hourly Gen (Confidential)	XI-2862	XI-2910
32 - RII AEP Modified Forecast (Confidential)	XI-2867	XI-2910
33 - Inputs Worksheet (Confidential)	XI-2869	XI-2910
34 - Bernstein Research Article, 10/27/14	XII-3050	--
35 - Capacity Resource Offer Prices for 2016/17 Delivery Year	XII-3066	XII-3101
36 - Capacity Resource Offer Prices for 2017/18 Delivery Year	XII-3066	XII-3101
37 - Generation Capacity Rider with Energy Intensive Customer Examples	XIII-3263	XIII-3325
38 - Summary of Switch Rates from EDUs to CRES Providers in Terms of Customers, 6/30/15	XIV-3507	XIV-3539
39 - Aggregation Activity in Ohio	XIV-3512	--
40 - USEPA Memorandum, Implementing the 2015 Ozone National Ambient Air Quality Standards	XIV-3574	--

## INDEX (Continued)

- - -

COMPANY EXHIBITS	IDENTIFIED	ADMITTED
41 - Constellation Terms and Conditions	XV-3697	XV-3762
42 - AEP Ohio Apples to Apples Chart, 1/6/14	XV-3712	XV-3762
43 - EnergyChoice Ohio Apples to Apples Chart, 4/25/14	XV-3713	XV-3762
44 - AEP Cross Exhibit 12- and 24-month Offers	XV-3713	XV-3762
45 - PJM AEP-Dayton Hub Day-Ahead LMP Calendar-Month 5 MW Futures, Quotes	XV-3804	XV-3853
46 - PJM AEP-Dayton Hub Day-Ahead Off-Peak Calendar-Month, 5 MW Futures, Quotes	XV-3804	XV-3853
47 - PJM AEP-Dayton Hub Day-Ahead LMP Calendar-Month, 5MW Futures, Settlements	XV-3806	XV-3853
48 - PJM AEP-Dayton Hub Day-Ahead Off-Peak Calendar-Month, 5MW 5 MW Futures, Settlements	XV-3806	XV-3853
49 - 5/15/2015 Amendment Letter	XVI-4034	XVI-4045
50 - Rebuttal Testimony of Karl R. Bletzacker	XVII-4071	XVII-4181
51 - Rebuttal Testimony of William A. Allen	XVII-4186	XVII-4409

- - -

## INDEX (Continued)

- - -

	SIERRA CLUB EXHIBITS	IDENTIFIED	ADMITTED
1	1 - Exhibit KDP-1, 10-1-15	I-65	II-360
2	2 - Power Purchase and Sale Agreement By and Between GenCo and OPC	I-67	II-360
3	3 - OVEC ICPA	I-69	II-360
4	4 - RPD-5-055	II-386	III-813
5	5 - OCC RPD-5-055_Supplemental 2015H1_LFT_FT_Base_Nominal_2015_04_24	II-389	III-813
6	6 - INT-1-002 (Confidential)	III-709	III-813
7	7 - SC INT-2-45 (Confidential)	IV-973	IV-1163
8	8 - 11-15-10 Letter from Mr. McManus and Comments on the Proposed CCR Rule by American Electric Power	IV-995	IV-1163
9	9 - 8-18-11 Letter from Mr. McManus and Comments of American Electric Power on Proposed Rule for Cooling Water Intake Structures at Existing Facilities	IV-1007	IV-1163
10	10 - 9-20-13 Letter from Mr. McManus and Comments of the Operating Companies of the American Electric Power System Inc. on Proposed Rule for Effluent Limitation Guidelines and Standards for the Steam Electric Power Generating Point Source Category	IV-1011	IV-1163
11	11 - SC INT-6-157	IV-1019	IV-1163

## INDEX (Continued)

- - -

SIERRA CLUB EXHIBITS	IDENTIFIED	ADMITTED
12 - OVEC's Annual Report - 2014	IV-1031	IV-1163
13 - Counties Violating the Primary Ground-Level Ozone Standard Based on Monitored Air Quality from 2011 to 2013	IV-1041	IV-1163
14 - SC INT-2-52 and Supplemental Attachment 1 (Confidential)	IV-1130	IV-1163
15 - SC INT-2-53 and Supplemental Attachment 1	IV-1140	IV-1163
16 - SC INT-6-138	IV-1204	V-1355
17 - SC INT-6-146	IV-1205	V-1355
18 - OCC RPD-5-055 Supplemental_ 2013H1_LFT_FT-Base_Nominal- 2013-10-21	V-1375	V-1524
19 - OCC RPD-5-055_Supplemental_ 2012H2_Price_Forecast_Nominal_ FTCA_CSAPRx_2012_08_27	V-1383	V-1524
20 - OCC RPD-5-055_Supplemental_ 2015H1_ LTF_FT_Base_Nominal_ 2015_04_24	V-1385	V-1524
21 - 2018/2019 RPM Base Residual Auction Results	V-1389	V-1524
22 - Appalachian Power, Integrated Resource Planning Report to the Commonwealth of Virginia State Corporation Commission, Docket No. PUE-2015-00036	V-1411	V-1524
23 - PPA Deactivations - Ohio Transmission Assessment, dated 9/4/2015	VI-1548	VI-1649

## INDEX (Continued)

- - -

	SIERRA CLUB EXHIBITS	IDENTIFIED	ADMITTED
24	- SC INT-2-070	VI-1565	VI-1649
25	- TEAC Recommendations to the PJM Board, dated February 2015	VI-1587	VI-1649
26	- ELPC INT-2-029	VI-1600	VI-1649
27	- ELPC INT-3-002	VI-1615	VI-1649
28	- SC INT-5-119	VI-1618	VI-1649
29	- SC RPD-2-071	VI-1618	VI-1649
30	- Rebuttal Testimony of William A. Allen in Support of AEP Ohio's Electric Security Plan, Case Nos. 13-2385-EL-SSO and 13-2386-EL-AAM	VII-1883	VII-2062
31	- Order in Case No. 2014-00225	VII-1891	VII-2062
32	- "2014 PJM Interconnection Queue Statistics Update"	VIII-2088	III-2213
33	- Direct Testimony of William Siderewicz, Case No. 14-2322-EL-BGN	VIII-2096	VIII-2213
34	- Letter to B. McNeal from S. Bloomfield, dated 9/29/2015, Re: NTE Ohio, LLC, OPSB Case No. 14-534-EL-BGN, with Attached Interconnection Agreement	VIII-2098	VIII-2213

- - -



## INDEX (Continued)

- - -

	SIERRA CLUB EXHIBITS	IDENTIFIED	ADMITTED
35	- Letter to B. McNeal from S. Bloomfield, dated 10/5/2015, Re: NTE Ohio, LLC, OPSB Case No. 14-534-EL-BGN	VIII-2099	VIII-2213
36	- "Generation Queues: Active (ISA, WMPA, etc.)" www.pjm. .com/Planning/generation- interconnection/generation- queue-active.aspx	VIII-2103	VIII-2213
37	- Direct Testimony of Paul L. Chernick	XI-2671	XI-2907
38	- Direct Testimony of Paul L. Chernick, (Confidential)	XI-2674	XI-2907
39	- Errata of Paul L. Chernick (Confidential)	XI-2675	XI-907
40	- Supplemental Testimony of Paul L. Chernick	XI-2676	XI-2907
41	- A report by the Staff of the Public Utilities Commission of Ohio, Ohio Utility Rate Survey, February 15, 2013	XVII-4210	XVII-4410
42	- A report by the Staff of the Public Utilities Commission of Ohio, Ohio Utility Rate Survey, August 15, 2013	XVII-4215	XVII-4410
43	- AEP Ohio Electric Apples to Apples Chart for weeks in October of 2013	XVII-4219	XVII-4410
44	- Residential Apples to Apples Comparison Chart, American Electric Power (AEP), for Weeks in October of 2014	XVII-4219	XVII-4410

## INDEX (Continued)

- - -

## SIERRA CLUB EXHIBITS IDENTIFIED ADMITTED

45 - Residential Apples to Apples  
Comparison Chart, American  
Electric Power (AEP), for  
Weeks in October of 2015 XVII-4219 XVII-4410

46 - AEP Ohio Electric Apples  
to Apples Chart for Weeks  
in January of 2014 XVII-4236 XVII-4410

- - -

## OMAEG EXHIBITS IDENTIFIED ADMITTED

1 - INT-2-017 I-124 II-361

2 - PJM Analysis of Operational  
Events and Market Impacts  
During the January 2014  
Cold Weather Events,  
5-8-2014 I-129 II-361

3 - PJM 2015 Winter Report,  
5-13-2015 I-131 II-361

4 - Testimony of Andrew Ott on  
PJM Interconnection,  
3-18-2015 I-139 II-361

5 - IEU-INT-4-016 I-342 II-361

6 - IEU INT-1-003 II-482 III-814

7 - IEU RPD-1-003, Second  
Supplemental Attachment 2  
(Confidential) III-722 III-814

8 - OEG INT-1-016 (Confidential) III-726 II-814

9 - IEU INT-4-017 (Confidential) III-734 III-814

10 - OEG INT-3-009 VI-1707 VI-1723

- - -

## INDEX (Continued)

- - -

OMAEG EXHIBITS	IDENTIFIED	ADMITTED
11 - Screenshot of web page http://faculty.washington. edu/krumme/systems/ multiplier.html	VII-1789	VII-2061
12 - "Regional Impact Models" by William A. Schaffer	VII-1792	VII-2061
13 - OEG INT-2-002	VII-1820	VII-2061
14 - ELPC INT-2-010	VII-1823	VII-2061
15 - ELPC INT-2-013	VII-1829	VII-2061
16 - Opinion and Order, Case Nos. 13-2385-EL-SSO and 13-2386-EL-AAM	VII-2061	--
17 - Letter to Examiner Parrot from S. Nourse, dated 6/30/2015	VII-1836	VII-2061
18 - "Table 10. Supply and disposition of electricity, 1990 through 2013"	VIII-2115	VIII-2213
19 - Direct Testimony of Edward W. Hill	XIII-3233	XIII-3323
20 - Errata of Edward W. Hill	XIII-3234	XIII-3323
21 - "The Business Owner's Guide to Discussing Economic Impacts"	XVII-4294	XVII-4410
22 - "Regional Economic Growth and the Economic Base Concept. Q: How do regional economies grow?"	XVII-4304	XVII-4410

- - -

## INDEX (Continued)

- - -

## OMAEG EXHIBITS IDENTIFIED ADMITTED

23 - "Regional and Local Economic  
Analysis Tools," by Mustafa  
Dinc, January 2002 XVII-4311 XVII-4410

- - -

## OCC EXHIBITS IDENTIFIED ADMITTED

1 - Exhibit KDP-2 I-167 II-365

2 - 5-15-15 Letter to  
Commission from Mr. Vegas I-185 II-365

3 - AEP 2nd Quarter 2014  
Earnings Release  
Presentation, 7-25-14 I-190 II-365

4 - AEP 49th EEI Financial  
Conference Presentation,  
11-13-14 I-191 II-365

5 - AEP May 2015 Investor  
Meetings I-192 II-365

6 - AEP June 2015 Investor  
Meetings I-193 II-365

7 - AEP September 2015  
Investor Meetings I-194 II-365

8 - Direct Testimony of  
Daniel J. Duann, Ph.D. IX-2238 IX-2279

9 - Direct Testimony of  
Beth E. Hixon IX-2280 IX-2311

10 - Direct Testimony of  
Noah C. Dormady IX-2311 IX-2383

11 - Direct Testimony of  
Kenneth Rose, Ph.D. X-2450 X-2490

- - -

## INDEX (Continued)

- - -

OCC EXHIBITS	IDENTIFIED	ADMITTED
12 - Direct Testimony of Ramteen Sioshansi	XII-3420	XII-3468
13 - Direct Testimony of Sarah E. Jackson	XIV-3555	XIV-3585
14 - Direct Testimony of Sarah E. Jackson (Confidential)	XIV-3555	XIV-3585
15 - Direct Testimony of James E. Wilson	XV-3765	XV-3852
16 - Direct Testimony of James E. Wilson (Confidential)	XV-3765	XV-3852
17 - Redline and Final Table 2	XV-3766	XV-3852
18 - JFW-2 Revised (Confidential)	XV-3766	XV-3852
19 - JFW-3	XV-3766	XV-3852
20 - Prefiled Testimony of Hisham M. Choueiki, PhD, P.E. Case No. 13-2385/2386	XVI-3912	XVI-4041
21 - "NYMEX Henry Hub Spot Prices and Futures Prices"	XVII-4154	XVII-4413
22 - RFA-3-015	XVII-4342	--
23 - RFA-3-016	XVII-4342	--
24 - RFA-3-017	XVII-4342	--

- - -

## INDEX (Continued)

- - -

ELPC EXHIBITS	IDENTIFIED	ADMITTED
1 - AEP Ohio Volume 1: 2012 to 2014 Energy Efficiency/ Peak Demand Reduction Action Plan	II-306	II-365
2 - 2014 Portfolio Status Report of the Energy Efficiency and Peak Demand Response Programs, Case No. 15-919-EL-EEC	II-311	II-365
3 - AEP Ohio Long-Term Forecast Report to the Public Utilities Commission of Ohio, Case No. 13-501-EL-FOR	II-319	II-365
4 - AEP Ohio Long-Term Forecast Report to the PUCO, Case No. 15-501-EL-FOR	II-322	II-365
5 - SC INT-1-002 (Confidential)	III-764	III-815
6 - ELPC INT-3-012 (Confidential)	III-765	III-815
7 - Stuart Clean Water Act Permit	IV-1116	--
8 - Zimmer Clean Water Act Permit	IV-1118	--
9 - Federal Register Notice, 8-21-15, Water Quality Standard Regulatory Revisions; Final Rule	IV-1120	IV-1165
10 - EPA Notice of Violation Regarding the Stuart Plant, 12-24-14	IV-1121	--

## INDEX (Continued)

- - -

ELPC EXHIBITS	IDENTIFIED	ADMITTED
11 - 12-16-14 Letter from U.S. EPA Region 5 and a Notice of Violation Regarding the Zimmer Plant	IV-1123	--
12 - NPDES Permit - Conesville	V-1317	--
13 - NPDES Permit - OVEC	V-1320	--
14 - Response to OCC INT-5-129	V-1507	V-1525
15 - ELPC-INT-3-019	VII-1995	VII-2063
16 - Lykins Energy Enrollment "Terms and Conditions"	XVII-4321	XVII-4413
17 - "Average retail price of electricity, monthly" from www.eia.gov	XVII-4329	XVII-4413

- - -

IEU OHIO EXHIBITS	IDENTIFIED	ADMITTED
1 - Direct Testimony of Jonathan A. Lesser, Ph.D.	XVI-3865	XVI-3888
2 - AEP Ohio's Reply Comments in Case No. 12-1126-EL-UNC	III-625	III-814
3 - INT-3-013	III-651	III-814
4 - INT-1-016	III-653	III-814
5 - State of the Market Report for PJM, Volume 2, Detailed Analysis	III-660	III-814
6 - State of the Market Report for PJM January through June	III-663	III-814

- - -

## INDEX (Continued)

- - -

IEU OHIO EXHIBITS	IDENTIFIED	ADMITTED
7 - Calculations Prepared by IEU-Ohio	III-668	III-814
8 - Exhibit KDP 2 Detailed View, IEU RPD-1-003 Competitively Sensitive Confidential Second Supplemental Attachment 1C (Confidential)	III-776	III-814
9 - Excerpt from Amendment No. 12 to Station Agreement, 1/1/14	V-1269	V-1356
10 - NERA Economic Consulting, letter dated 4/28/2014, Re: Notification of Auction Results under AEP Ohio's CBP	VII-1972	VII-2062
11 - NERA Economic Consulting, letter dated 5/12/2015, Re: Notification of Auction Results under AEP Ohio's CBP	VII-1974	VII-2062
12 - OEG INT-1-001	VII-1989	VII-2062
13 - "Generator Deactivations (as of September 11, 2015)"	VIII-2179	VIII-2213
14 - "Future Deactivations (as of September 11, 2015)"	VIII-2188	VIII-2213
15 - Direct Testimony of Stephen J. Baron Case No. 990-1658-EL-ETP	XI-2915	--
16 - CO2 Emission Performance Rate and Goal Computation Technical Support Document for CPP Final Rule	XIII-3191	--
17 - AEPGR FERC Request for Waiver	XVI-3935	--



## INDEX (Continued)

- - -

IEU OHIO EXHIBITS	IDENTIFIED	ADMITTED
-------------------	------------	----------

18	- AEP third quarter 10-Q SEC filing	XVII-4160 XVII-4182
----	--	---------------------

- - -

IGS EXHIBIT	IDENTIFIED	ADMITTED
-------------	------------	----------

1	- IEU RPD-1-003 Competitively Sensitive Confidential Second Supplemental Attachment 1B (Confidential)	III-745 III-815
---	--	-----------------

2	- EIA Short-Term Energy Outlook 9/9/15	V-1458 V-1525
---	---	---------------

3	- EIA Weekly Natural Gas Report 9/25/15	V-1462 V-1525
---	--	---------------

4	- Response to IGS INT-2	V-1472 V-1525
---	-------------------------	---------------

5	- Direct Testimony of Joseph Haugen	X-2493 X-2527
---	--	---------------

6	- Direct Testimony of Paul Leanza	X-2599 X-2597
---	--------------------------------------	---------------

7	- Errata Sheet of Paul Leanza	X-2600 X-2597
---	----------------------------------	---------------

8	- Direct Testimony of Matthew White	XIV-3587 XIV-3647
---	--	-------------------

9	- EIA "Analysis & Projections World Shale Resource Assessments, last updated September 24, 2015	XVII-4123 XVII-4181
---	--	---------------------

10	- "LNG's effect on the supply/demand equation"	XVII-4126 XVII-4181
----	---	---------------------

11	- "Columbia Gas of Ohio Standard Choice Offer"	XVII-4133 --
----	---	--------------

## INDEX (Continued)

- - -

## IGS EXHIBIT IDENTIFIED ADMITTED

12 - "Natural Gas Market Update  
2015 LDC/SCC Conference  
Fredericksburg, VA" XVII-4145 --

13 - "Futures Daily Market  
Report for Henry Hub,  
21-Oct-2015" XVII-4174 --

- - -

## DYNEGY EXHIBITS IDENTIFIED ADMITTED

1 - Direct Testimony of  
Dean Ellis X-2546 X-2597

- - -

## WAL-MART EXHIBITS IDENTIFIED ADMITTED

1 - Direct Testimony of  
Steve W. Chriss X-2529 X-2544

- - -

## KROGER EXHIBIT IDENTIFIED ADMITTED

1 - Causes and Lessons of the  
California Electricity  
Crisis, September 2001 III-927 III-940

2 - Direct Testimony of  
Kevin C. Higgins XIV-3540 XIV-3553

- - -

## P3/EPSC EXHIBITS IDENTIFIED ADMITTED

1 - Non OVEC PPA Units table  
and Exhibit KDP-1 V-1295 V-1356

- - -

## INDEX (Continued)

- - -

	P3/EPSA EXHIBITS	IDENTIFIED	ADMITTED
2	- NERA Economic Consulting, letter dated 5/3/2015, Re: Update to Redactions	VII-2044	VII-2063
3	- Letter to B. McNeal from M. Settineri, dated 10/5/2015, Re: Case No. 15-1716-EL-BGN Pre-Application Notification Letter	VIII-2143	VIII-2213
4	- Letter to B. McNeal from S. Bloomfield, dated 7/23/2015, Re: Oregon Clean Energy, OPSB Case No. 15-853-EL-BGA, with attached photographs	VIII-2156	VIII-2213
5	- Letter to J. O'Dell from M. Settineri, dated 9/30/2015, Re: Commencement of Construction for Phase II of 345 kV Interconnection Correspondence regarding ODOT Permit, Case No. 14-0591-EL-BLN, with attached permit	VIII-2163	VIII-2213
6	- Letter to J. O'Dell from M. Settineri, dated 8/17/205, Re: Letter of Notification of Compliance for the Carroll County Energy LLC & Pre-construction Conference for Phase I of Natural Gas Pipeline Case No. 13-2425-GA-BNR	VIII-2163	VIII-2213
7	- Carroll County Energy Press Release "Construction"	VIII-2167	VIII-2213

## INDEX (Continued)

- - -

## P3/EPSCA EXHIBITS IDENTIFIED ADMITTED

8 - Direct Testimony of  
A. Joseph Cavicchi XIV-3482 XIV-3538

9 - Direct Testimony of  
A. Joseph Cavicchi  
(Confidential) XIV-3482 XIV-3538

- - -

## OEG EXHIBITS IDENTIFIED ADMITTED

1 - Direct Testimony of  
Stephen J. Baron XI-2912 XI-3008

2 - Direct Testimony of  
Alan S. Taylor XIII-3328 XIII-3376

3 - Direct Testimony of  
Lane Kollen XIII-3378 XIII-3420

- - -

## IMM EXHIBITS IDENTIFIED ADMITTED

1 - Direct Testimony  
of Joseph E. Bowring XII-3035 XII-3097

- - -

## OEC/EDF EXHIBITS IDENTIFIED ADMITTED

1 - Direct Testimony  
of John Finnigan XII-3132 XII-3163

2 - Direct Testimony  
of Diane Munns XII-3102 XII-3131

- - -

## INDEX (Continued)

- - -

## MAREC EXHIBIT

IDENTIFIED ADMITTED

1 - Direct Testimony of  
Bruce Burcat

XIII-3181 XIII-3231

- - -

## EXELON/RESA EXHIBITS

IDENTIFIED ADMITTED

1 - Direct Testimony of  
Lael Campbell

XV-3660 XV-3755

2 - WP WAA-2

XVII-4380 XVII-4413

3 - 2014 State of the Market  
Report for PJM

XVII-4402 XVII-4413

- - -

## STAFF EXHIBITS

IDENTIFIED ADMITTED

1 - Direct Testimony of  
Hisham M. Choueiki,  
Ph.D., P.E.

XVI-3889 XVI-4039

- - -

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**11/4/2015 3:47:10 PM**

**in**

**Case No(s). 14-1693-EL-RDR, 14-1694-EL-AAM**

Summary: Transcript In the Matter of the application of Ohio Power Company hearing(s) - Composite Index electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Gibson, Karen Sue Mrs.