

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

**In the Matter of the Annual Report of**

**Pursuant to Rule 10 of the Electric  
Service and Safety Standards, Ohio  
Administrative Code 4901:1-10-10**

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:  
:  
:**

**Case No. 15-0581-EL-ESS**

**ANNUAL REPORT  
OF THE DUKE ENERGY OHIO COMPANY**

**Pursuant to Rule 10 of the Electric Service and Safety Standards, Ohio, Administrative Code  
4901:1-10-10, ("Duke") submits the following Annual Report. The Report is attached.**

**Report Date & Time: April 23, 2015 9:00 am**

**Duke Energy  
Duke Energy Ohio  
Rule #10  
2014  
Distribution System Reliability Report**

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**1. 4901:1-10-(C)(1)**

**CAIDI - Customer Average Interruption Duration  
Index (In Minutes)**

a.	b.	c.
CAIDI Performance Standard	CAIDI After Exclusions	CAIDI Before Exclusions
121.25	108.28	112.94

**2. 4901:1-10-(C)(1)**

**SAIFI - System Average Interruption Frequency Index**

a.	b.	c.
SAIFI Performance Standard	SAIFI After Exclusions	SAIFI Before Exclusions
1.17	0.99	1.29

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**3. 4901:1-10-(C)(1) Supporting Data Report**

<b>a.</b>	<b>b.</b>	<b>c.</b>	<b>d.</b>	<b>e.</b>
Number Of Customers Served	Number Of Customer Interruptions After Exclusions	Number Of Customer Interruptions Before Exclusions	Number Of Customer Minutes Interrupted After Exclusions	Number Of Customer Minutes Interrupted Before Exclusions
697,677	687,533	898,268	74,445,999	101,447,139

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**4. 4901:1-10-10(C)(2) Major Event Outage (MEO)**

a.	b.	c.	d.	e.	f.
Major Event Date	Major Event Description	Customers Interrupted During MEO	Customer Minutes Interrupted During MEO	CAIDI During MEO (in minutes)	SAIFI During MEO
01/25/2014	Localized high winds blew snow into Trenton Station switchgear causing fault	14,850	4,417,047	297.44	0.02
06/16/2014	Equipment Failure at Oakley Substation due to failure of transformer bank #10 while transformer bank #9 was undergoing maintenance	24,254	5,444,398	224.47	0.03
06/16/2014	Transmission portion of Major Event Day on 6/16/2014	7,304	2,305,160	315.60	0.01
11/24/2014	Wind	46,961	11,220,830	238.94	0.07

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**5.a. 4901:1-10-10(C)(2) Transmission Circuit Interruption Supporting Data**

1.	2.	3.	4.	5.	6.
Date Transmission Outage Began	Reference ID Of Transmission Circuit Impacted	Time Outage Occurred	Size (in kV) Of Transmission Circuit Or Equipment Involved	Cause Of Outage Including Specific Type Of Equipment And/Or Facility Causing Interruption	Total Length Of Interruption (in minutes)
01/03/2014	046 - 3861	12 00 am	69	OH, Primary	91
01/06/2014	300 - 3762	12:00 am	69	Static Failure	330,815
01/06/2014	300 - 3762	12:00 am	69	Insulator	274,093
02/17/2014	046 - 3861	12:00 am	69	Static Failure	17,507
02/25/2014	012 - 2166	12 00 am	69	Equipment Failure	310,366
03/12/2014	090 - 9062	12.00 am	69	Insulator	53,216
03/12/2014	090 - 9064	12.00 am	69	Equipment Failure	5,863
04/01/2014	046 - 3861	12:00 am	69	Other	73,621
04/04/2014	017 - 1762	12:00 am	69	Unknown	217,194

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**5.a. 4901:1-10-10(C)(2) Transmission Circuit Interruption Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.
Date Transmission Outage Began	Reference ID Of Transmission Circuit Impacted	Time Outage Occurred	Size (in kilovolts) Of Transmission Circuit Or Equipment Involved	Cause Of Outage Including Specific Type Of Equipment And/Or Facility Causing Interruption	Total Length Of Interruption (in minutes)
04/07/2014	017 - 1762	12:00 am	69	Equipment Failure	65,364
04/14/2014	097 - 9787	12:00 am	138	Vegetation in Lines	286,165
04/15/2014	057 - 5767	12:00 am	69	Auto Damage	135,394
04/23/2014	037 - 3763	12:00 am	69	Tree Cut	89,589
06/01/2014	085 - 3869	12:00 am	69	Equipment Failure	4,158
06/16/2014	008 - 868	12:00 am	69	OH, Primary	2,305,160
06/23/2014	043 - 4366	12:00 am	69	Trees (Non-Preventable)	115,220
07/01/2014	054 - 5484	12:00 am	138	Lightning	141,484
07/14/2014	068 - 6864	12:00 am	69	Cross Arm	286,312

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**5.a. 4901:1-10-10(C)(2) Transmission Circuit Interruption Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.
Date Transmission Outage Began	Reference ID Of Transmission Circuit Impacted	Time Outage Occurred	Size (in kilovolts) Of Transmission Circuit Or Equipment Involved	Cause Of Outage Including Specific Type Of Equipment And/Or Facility Causing Interruption	Total Length Of Interruption (in minutes)
08/20/2014	058 - 5863	12:00 am	69	Weather	49,708
08/22/2014	012 - 2166	12:00 am	69	Equipment Failure	128,343
09/11/2014	063 - 6365	12:00 am	69	Customer Equipment	48,650
10/06/2014	046 - 3861	12:00 am	69	Weather, Wind Related	5,291
10/14/2014	080 - 5381	12:00 am	138	Tree Fell	71,388
11/17/2014	029 - 2764	12:00 am	69	Tree Fell	903,873

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
01/03/2014	1	91	1	140 - 41	1	91
01/06/2014	3,219	330,815	6	033 - 41	32	5,696
				033 - 42	44	7,876
				033 - 43	902	170,478
				250 - A	178	31,684
				352 - 41	1,914	107,184
				352 - A	149	7,897
01/06/2014	3,704	274,093	8	033 - 41	32	4,000
				033 - 42	44	5,500
				033 - 43	902	112,750
				033 - C	395	11,455
				033 - D	90	2,610



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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
				250 - A	178	22,250
				352 - 41	1,914	107,184
				352 - A	149	8,344
02/17/2014	398	17,507	4	038 - 41	86	3,784
				038 - 42	310	13,640
				099 - 42	1	29
				140 - 41	1	54
02/25/2014	22,169	310,366	22	005 - 41	1,873	26,222
				005 - 42	2,339	32,746
				005 - 43	1,836	25,704
				021 - 2123	1	14
				021 - 41	841	11,774

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
				021 - 42	4	56
				021 - 43	1,458	20,412
				021 - 44	1,659	23,226
				021 - 45	104	1,456
				021 - 46	1,550	21,700
				021 - 47	18	252
				021 - 48	960	13,440
				021 - 49	391	5,474
				021 - A	76	1,064
				021 - C	240	3,360
				021 - D	122	1,708
				021 - F	135	1,890

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
				267 - 42	1,776	24,864
				265 - 41	2,442	34,188
				265 - 42	1,938	27,132
				265 - 43	659	9,226
				265 - 44	1,747	24,458
03/12/2014	451	5,863	1	115 - 41	451	5,863
03/12/2014	6,652	53,216	5	232 - 41	2,384	19,072
				232 - 42	2,598	20,784
				232 - E	146	1,168
				232 - G	784	6,112
				296 - 41	760	6,080
04/01/2014	399	73,621	4	038 - 41	18	3,078

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
				038 - 41	68	9,860
				038 - 42	312	60,528
				140 - 41	1	155
04/04/2014	2,049	217,194	1	583 - 43	2,049	217,194
04/07/2014	5,028	65,364	5	268 - 41	1,253	16,289
				268 - 42	1,721	22,373
				583 - 41	1	13
				583 - 42	1	13
				583 - 43	2,052	26,676
04/14/2014	26,015	286,165	14	036 - 41	1,321	14,531
				036 - 42	276	3,036
				036 - 43	19	209

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
				036 - 44	1,728	19,008
				047 - 41	994	10,934
				047 - 42	2,160	23,760
				047 - 43	2,360	25,960
				047 - 44	3,179	34,969
				047 - 45	2,120	23,320
				047 - 46	2,228	24,508
				079 - 41	1,981	21,571
				079 - 42	1,928	21,188
				079 - 43	2,240	24,640
				079 - 44	3,503	38,533
04/15/2014	2,910	135,394	2	207 - 41	1,187	119,887

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
				327 - 41	1,723	15,507
04/23/2014	5,377	89,589	10	034 - 41	1	9
				034 - 41	1,889	28,335
				034 - 42	1	9
				034 - 42	51	561
				034 - 42	1,055	15,825
				034 - B	375	5,625
				034 - D	175	2,625
				215 - 41	1,307	26,140
				215 - 42	227	4,540
				215 - 43	296	5,920
06/01/2014	27	4,158	1	085 - 41	27	4,158

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
06/16/2014	7,304	2,305,160	7	045 - A	132	44,748
				092 - 44	241	23,618
				092 - 44	310	90,830
				283 - 41	1,107	371,952
				283 - 42	2,593	879,027
				283 - 43	554	187,252
				283 - 44	2,367	707,733
06/23/2014	8,230	115,220	6	071 - 41	2,081	28,854
				141 - 41	2,160	30,240
				141 - 42	1,901	26,614
				341 - 41	563	7,882
				341 - 42	567	7,938

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
				341 - 43	978	13,692
07/01/2014	4,564	141,484	3	169 - 41	1,630	50,530
				169 - 42	1,332	41,292
				169 - 43	1,602	49,662
07/14/2014	2,753	286,312	1	185 - 42	2,753	286,312
08/20/2014	1,640	49,708	7	058 - 52	274	32,332
				102 - A	1	119
				102 - B	1	119
				193 - B	138	8,556
				301 - 41	489	3,423
				301 - 42	430	3,010
				359 - A	307	2,149



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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
08/22/2014	10,922	128,343	8	005 - 41	2,894	37,622
				005 - 42	1,453	21,795
				005 - 43	2,721	38,094
				021 - 2123	1	8
				021 - 41	1,171	9,368
				021 - 44	2,052	16,416
				021 - 47	19	152
				021 - 49	611	4,888
09/11/2014	2,250	48,650	2	051 - 44	1,406	43,586
				126 - 41	844	5,064
10/06/2014	407	5,291	3	038 - 41	89	1,157
				038 - 42	317	4,121

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) Supporting Data ... Continued ...**

1.	2.	3.	4.	5.	6.	7.
Date The Transmission Outage Began	Customers Interrupted Per Transmission Outage	Customer Minutes Interrupted Per Transmission Outage	The Number Of Distribution Circuits Impacted	Circuit Reference ID For Each Of The Distribution Circuits Impacted By The Interruption	Customers Interrupted By Distribution Circuit Reference ID	Customer Minutes Interrupted By Distribution Circuit Reference ID
				140 - 41	1	13
10/14/2014	3,966	71,388	2	162 - 41	2,150	38,700
				162 - 42	1,816	32,688
11/17/2014	4,235	903,873	4	027 - 41	393	83,709
				027 - 42	212	45,156
				027 - 43	906	192,072
				027 - 44	2,724	582,936

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**5.c. 4901:1-10-10(C)(2) Index Values During Transmission Outage(s) Supporting Data**

1.	2.	3.
Date Transmission Outage Began	CAIDI For Period Of Outage (minutes)	SAIFI For Period Of Outage
01/03/2014	91	0.00
01/06/2014	103	0.00
01/06/2014	74	0.01
02/17/2014	44	0.00
02/25/2014	14	0.03
03/12/2014	13	0.00
03/12/2014	8	0.01
04/01/2014	185	0.00
04/04/2014	106	0.00

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**5.c. 4901:1-10-10(C)(2) Index Values During Transmission Outage(s) Supporting Data**

... Continued ...

1.	2.	3.
Date Transmission Outage Began	CAIDI For Period Of Outage (minutes)	SAIFI For Period Of Outage
04/07/2014	13	0.01
04/14/2014	11	0.04
04/15/2014	47	0.00
04/23/2014	17	0.01
06/01/2014	154	0.00
06/16/2014	316	0.01
06/23/2014	14	0.01
07/01/2014	31	0.01
07/14/2014	104	0.00

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**5.c. 4901:1-10-10(C)(2) Index Values During Transmission Outage(s) Supporting Data**

**... Continued ...**

1.	2.	3.
Date Transmission Outage Began	CAIDI For Period Of Outage (minutes)	SAIFI For Period Of Outage
08/20/2014	30	0.00
08/22/2014	12	0.02
09/11/2014	22	0.00
10/06/2014	13	0.00
10/14/2014	18	0.01
11/17/2014	213	0.01

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**6.a. 4901:1-10-10(C)(3)(a) Data Excluding Major Events And Transmission Outages**

Outage Cause	Events	Customers Interrupted	Customer Minutes Interrupted
Animal/Bird	1,715	46,604	4,206,299
Auto Damage	1,064	95,437	9,363,678
Crew Planned Outage	10,444	60,253	4,264,131
Equipment Failure	3,839	187,351	21,010,049
Lightning	685	19,189	3,018,758
Other	4,074	62,325	4,804,824
Tree Fell	2,288	135,012	18,467,883
Unknown	843	26,428	2,749,310
Weather	498	54,934	6,561,067

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**6.b. 4901:1-10-10(C)(3)(b) Data For Major Events Only**

Outage Cause	Events	Customers Interrupted	Customer Minutes Interrupted
Animal/Bird	11	55	10,470
Auto Damage	17	558	154,556
Crew Planned Outage	59	374	78,361
Equipment Failure	102	38,654	8,932,576
Lightning	6	12	3,938
Other	84	2,423	823,216
Tree Fell	281	18,259	5,061,385
Unknown	68	11,933	3,508,134
Weather	195	21,101	4,814,799

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**6.c. 4901:1-10-10(C)(3)(c) Data For Transmission Outages Only**

Outage Cause	Events	Customers Interrupted	Customer Minutes Interrupted
Animal/Bird	0	0	0
Auto Damage	10	8,234	224,404
Crew Planned Outage	0	0	0
Equipment Failure	55	48,728	904,221
Lightning	0	0	0
Other	14	6,353	396,364
Tree Fell	7	8,201	975,261
Unknown	14	26,015	286,165
Weather	25	19,835	827,290

**7. 4901:1-10-(C)(4) Momentary Interruptions**

Total Number = 1,180,899



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

**Commission of Ohio Docketing Information System on**

**4/24/2015 10:57:21 AM**

**in**

**Case No(s). 15-0581-EL-ESS**

Summary: Annual Report Revised Annual Report of Duke Energy Ohio, Inc. Pursuant to Rule 10 of the Electric Service and Safety Standards, O.A.C. 4901:1-10-10 electronically filed by Dianne Kuhnell on behalf of Duke Energy Ohio, Inc. and Spiller, Amy B. and Watts, Elizabeth H.