

FILE

27

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

Case No. 11-1167-EL-ESS

PUCO

2011 MAR 31 AM 8:14

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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: March 28, 2011 3:07 pm

Duke Energy  
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Rule #10  
2010  
Distribution System Reliability Report

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Technician                      Date Processed MAR 31 2011

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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
108.79	110.85	112.76

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

**SAIFI - System Average Interruption Frequency Index**

a.	b.	c.
SAIFI Performance Standard	SAIFI After Exclusions	SAIFI Before Exclusions
1.44	1.10	1.41

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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>
<b>Number Of Customers Served</b>	<b>Number Of Customer Interruptions After Exclusions</b>	<b>Number Of Customer Interruptions Before Exclusions</b>	<b>Number Of Customer Minutes Interrupted After Exclusions</b>	<b>Number Of Customer Minutes Interrupted Before Exclusions</b>
681,871	750,775	962,047	83,226,475	108,475,762

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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
06/21/2010	Thunderstorm	44,809	12,764,861	284.87	0.07
10/26/2010	Wind, Rain	23,904	5,808,645	243.00	0.04

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

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)
01/02/2010	090 - 9064	12:00 am	69	Equipment Failure	218
01/20/2010	090 - 9064	12:00 am	69	Equipment Failure	94
03/14/2010	056 - 5661	12:00 am	69	Tree Fell	126
04/26/2010	012 - 2166	12:00 am	69	Equipment Failure	53
05/11/2010	038 - 3865	12:00 am	69	Customer Equipment	696
06/02/2010	056 - 5661	12:00 am	69	Tree Fell	301
06/12/2010	017 - 1765	12:00 am	69	Lightning	625
06/14/2010	012 - 2166	12:00 am	69	Lightning	0
06/15/2010	083 - 8283	12:00 am	138	Insulator	83

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**5.a. 4901:1-10-10(C)(2) Transmission Circuit Interruption 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)
06/23/2010	056 - 5661	12:00 am	69	Tree Fell	291
06/27/2010	069 - 6962	12:00 am	69	Tree Fell	69
08/14/2010	057 - 5762	12:00 am	69	Tree Fell	941
09/02/2010	038 - 3865	12:00 am	69	Auto Damage	60
09/07/2010	043 - 4366	12:00 am	69	Tree Fell	6
09/07/2010	069 - 6962	12:00 am	69	Lightning	16
09/11/2010	057 - 5762	12:00 am	69	Lightning	66
09/13/2010	006 - 689	12:00 am	138	Auto Damage	7
09/19/2010	032 - 3265	12:00 am	69	Animal/Bird	59

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**5.a. 4901:1-10-10(C)(2) Transmission Circuit Interruption 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)
09/23/2010	046 - GE2	12:00 am	69	Equipment Failure	217
09/25/2010	032 - 3265	12:00 am	69	Animal/Bird	85
09/27/2010	063 - 6365	12:00 am	69	Equipment Failure	86
10/13/2010	038 - 3885	12:00 am	138	Tree Fell	16
11/23/2010	038 - 3865	12:00 am	138	Lightning	19

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
01/02/2010	2,673	112,266	2	115 - 41 115 - 42	467 2,206	19,614 92,652
01/20/2010		106,920	2	115 - 41 115 - 42	467 2,206	18,680 88,240
03/14/2010	6,380	403,254	10	033 - 41 033 - 42 033 - 43 033 - C 033 - D 158 - 41 158 - 43 250 - A	29 115 908 367 59 957 1,666 259	2,871 1,725 89,892 5,505 885 29,667 51,646 25,123

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
				352 - 41	1,896	183,912
				352 - A	124	12,028
04/25/2010	5,411	286,783	2	005 - 41	2,784	147,552
				005 - 43	2,627	139,231
05/11/2010	5,209	407,959	3	103 - 41	1,878	125,826
				103 - 42	1,597	106,999
				208 - 41	1,734	175,134
06/02/2010	7,235	243,069	11	033 - 41	30	630
				033 - 42	89	1,780
				033 - 43	891	17,820
				033 - C	370	7,400
				033 - D	58	1,160

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
				158 - 41	1,166	11,660
				158 - 42	749	7,490
				158 - 43	1,651	16,510
				250 - A	251	12,299
				352 - 41	1,857	155,988
				352 - A	123	10,332
06/12/2010	5,386	34,015	6	095 - 41	2,552	15,312
				095 - 43	1,565	9,390
				095 - 44	0	0
				095 - 45	982	6,874
				095 - 47	215	1,935
				095 - 48	72	504

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
06/14/2010	16,864	118,048	8	005 - 41	2,550	17,850
				005 - 42	3,918	27,426
				005 - 42	3,918	27,426
				005 - 43	2,889	18,823
				021 - 41	1,123	7,861
				021 - 44	1,989	13,923
				021 - 47	18	126
				021 - 49	659	4,613
06/15/2010	1,151	11,290	3	082 - 23-2	498	3,984
				082 - 43	265	2,650
				082 - 48	388	4,656
06/23/2010	7,973	313,354	12	033 - 41	30	1,800

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
				033 - 42	83	4,980
				033 - 43	895	53,700
				033 - C	360	5,400
				033 - D	57	855
				158 - 41	1,164	30,264
				158 - 42	753	19,578
				158 - 42	753	19,578
				158 - 43	1,639	42,614
				250 - A	245	14,945
				352 - 41	1,869	112,140
				352 - A	125	7,500
06/27/2010	12,071	832,899	10	071 - 41	1,995	137,655

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
				145 - 41	1,572	108,468
				145 - 42	1,917	132,273
				145 - 43	1,349	93,081
				145 - 44	363	25,047
				209 - 41	455	31,395
				212 - 41	413	28,497
				212 - 42	0	0
				362 - 41	1,084	74,796
				362 - 42	2,923	201,687
08/14/2010	2,874	114,960	3	183 - 41	1,267	50,680
				183 - 42	978	39,120
				183 - 43	629	25,160

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
09/02/2010	5,135	402,060	4	103 - 41	1,874	164,912
				103 - 42	1,600	140,800
				183 - 43	0	0
				208 - 41	1,661	96,338
09/07/2010	2,010	522,600	1	141 - 42	2,010	522,600
09/07/2010	13,213	198,195	10	071 - 41	2,024	30,360
				145 - 41	1,568	23,520
				145 - 42	1,918	28,770
				145 - 43	1,471	22,065
				145 - 44	365	5,475
				209 - 41	462	6,930
				212 - 41	420	6,300

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
				212 - 42 362 - 41 362 - 42	926 1,106 2,953	13,890 16,590 44,295
09/11/2010	5,950	438,034	5	183 - 41 183 - 42 183 - 43 363 - 41 363 - 42	1,263 973 636 1,437 1,641	84,621 65,191 42,612 96,279 149,331
09/13/2010	2,988	20,916	4	006 - 41 006 - 43 006 - 44 006 - 47	828 184 901 1,075	5,796 1,288 6,307 7,525

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
09/19/2010	6,260	422,744	5	024 - 41	1,086	62,988
				108 - 41	1,356	138,312
				150 - 41	1,336	77,488
				150 - 42	1,241	71,978
				150 - 42	1,241	71,978
09/23/2010	1	16	1	095 - 41	1	16
09/25/2010	4,270	358,680	4	108 - 41	1,356	113,904
				108 - 42	602	50,568
				108 - 43	976	81,984
				150 - 41	1,336	112,224
09/27/2010	12,447	957,305	9	051 - 41	2,226	193,662
				051 - 42	1,213	105,531

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
				051 - 43	1,659	144,333
				051 - 44	1,388	120,756
				051 - 45	2,116	184,092
				051 - 46	1,173	102,051
				126 - 41	909	36,360
				126 - A	124	4,960
				206 - 41	1,639	65,560
10/13/2010	10,727	341,168	9	057 - 43	1,328	58,432
				057 - 44	2,792	122,848
				057 - 45	909	39,896
				057 - 46	1,146	50,424
				166 - 41	1,850	27,750

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**5.b. 4901:1-10-10(C)(2) Distribution Circuits Impacted By Transmission Outage(s) 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
				166 - 42	452	6,780
				166 - 43	2,207	33,105
				166 - 44	34	510
				186 - 51	9	1,323
11/23/2010	3,658	29,256	2	103 - 42	1,996	15,968
				208 - 41	1,662	13,288

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

1.	2.	3.
Date Transmission Outage Began	CAIDI For Period Of Outage (minutes)	SAIFI For Period Of Outage
01/02/2010	42	0.00
01/20/2010	40	0.00
03/14/2010	63	0.01
04/25/2010	53	0.01
05/11/2010	78	0.01
06/02/2010	34	0.01
06/12/2010	6	0.01
06/14/2010	7	0.02
06/15/2010	10	0.00

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

1.	2.	3.
Date Transmission Outage Began	CAIDI For Period Of Outage (minutes)	SAIFI For Period Of Outage
06/23/2010	39	0.01
06/27/2010	69	0.02
08/14/2010	40	0.00
09/02/2010	78	0.01
09/07/2010	260	0.00
09/07/2010	15	0.02
09/11/2010	74	0.01
09/13/2010	7	0.00
09/19/2010	68	0.01

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

1.	2.	3.
Date Transmission Outage Began	CAIDI For Period Of Outage (minutes)	SAIFI For Period Of Outage
09/23/2010	16	0.00
09/25/2010	84	0.01
09/27/2010	77	0.02
10/13/2010	32	0.02
11/23/2010	8	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	2,538	84,896	7,064,800
Auto Damage	684	67,566	6,606,128
Crew Planned Outage	1,870	17,899	1,746,101
Customer Equipment	8	5	1,174
Dig In	16	208	27,277
Equipment Failure	4,021	265,940	32,148,017
Lightning	806	25,422	4,609,037
Misapplication/Faulty Construction	13	17,107	936,985
Other	4,727	23,169	2,436,538
Overload	22	906	81,233
Personnel Error	102	29,407	1,395,429
Transmission Trouble	1	1	300
Tree Cut	11	2,733	140,556
Tree Fell	1,952	135,102	18,655,723
Unknown	1,872	37,848	4,487,229
Vandalism	4	466	7,163
Weather	375	17,295	2,395,039
Workmanship	0	0	0

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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	14	321	38,142
Auto Damage	10	104	12,409
Crew Planned Outage	7	154	18,652
Customer Equipment			
Dig In			
Equipment Failure	62	9,051	2,133,066
Lightning	82	3,036	1,219,790
Misapplication/Faulty Construction			
Other	123	1,009	340,594
Overload			
Personnel Error	3	1,344	304,642
Transmission Trouble			
Tree Cut			
Tree Fell	261	33,190	9,052,702
Unknown	71	5,508	1,301,639
Vandalism			
Weather	266	14,996	4,150,870

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

**... Continued ...**

<b>Outage Cause</b>	<b>Events</b>	<b>Customers Interrupted</b>	<b>Customer Minutes Interrupted</b>
Workmanship			

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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	9	10,530	781,424
Auto Damage	4	5,135	402,050
Crew Planned Outage			
Customer Equipment			
Dig In			
Equipment Failure	24	29,349	1,648,334
Lightning			
Misapplication/Faulty Construction			
Other	1	184	1,288
Overload			
Personnel Error			
Transmission Trouble	9	6,109	443,439
Tree Cut			
Tree Fell	36	45,730	1,825,756
Unknown	10	18,198	606,982
Vandalism			
Weather	51	51,325	1,434,626
Workmanship	3	2,804	19,628

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

**Total Number = 522,798**